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Financial Reporting: An Analysis of Accounting Methods and Principles

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FINANCIAL REPORTING: AN ANALYSIS OF ACCOUNTING METHODS AND PRINCIPLES

by
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Abstract

This paper is a compilation of several analyses of various accounting methods and practices. Each chapter takes a different area of accounting and uses a well-known company to explain the theory behind a specific method or area of accounting. Through reference to these companies, the paper attempts to simplify some complex accounting processes. The real business examples help illustrate these concepts in a reader friendly format. The goal of this paper is to convey basic accounting principles to those without prior knowledge in accounting, allowing them to grasp the main concepts and understand the theory behind the standards of this profession.

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1. Financial Analysis—Glenwood Heating Inc. vs. Eads Heater Inc.

Executive Summary

Glenwood and Eads had nearly identical years as far as overall operations are concerned. However, their differing methods of reporting items such as Inventory and Depreciation expense caused a major variance in Net Incomes: Eads' had a net income of $70,515 while Glenwood's was $92,742. While this may seem like Glenwood had a better year, deeper analysis shows that Eads actually had greater cash flows (by over $7,000) and will be more financially stable in the future. Because of Eads' accounting methods and investment decisions, explained in analysis below, it will be a more profitable company in the long run. Invest in Eads.

Ratio Analysis

At first glance of Figures 1-1 and 1-2, Glenwood seems to be in a better financial position than Eads. Because of the different reporting of inventory and thus overall variance in current assets, Glenwood appears to be in a better liquidity position than Eads. Glenwood's current ratio of Quick Ratio of 23.93% looks better to potential Creditors when compared to Eads' Quick Ratio of 20.60%.

Figure 1-1 Glenwood Ratio Analysis			
Liquidity		**Profitability**	
Current Ratio	39.13%	Gross Profit Margin	55.58%
Acid Test (Quick Ratio)	23.93%	Profit Margin	0.23
Accounts Receivable Turnover	4.01	Return on Assets	14.43%
Days to Collect Receivables	91.04	Return on Owner's Equity	40.40%
Inventory Turnover	2.82	Earnings Per Share	$28.98
Days to Sell Inventory	129.50	Debt Ratio	0.64
Operating Cycle	220.55	Times Interest Earned	5.47

As the reporting of credit sales was identical for both companies, related ratios were identical for the two, at 4.01 for Accounts Receivable Turnover and 91.04 for Days to Collect Receivables. For a company selling more expensive items such as heating units in this case, these numbers are reasonable.

Figure 1-2 Eads Ratio Analysis			
Liquidity		**Profitability**	
Current Ratio	463.18%	Gross Profit Margin	52.62%
Acid Test (Quick Ratio)	309.05%	Profit Margin	17.70%
Accounts Receivable Turnover	4.01	Return on Assets	10.02%
Days to Collect Receivables	91.04	Return on Owner's Equity	34.01%
Inventory Turnover	3.70	Earnings Per Share	$22.04
Days to Sell Inventory	98.60	Debt Ratio	0.05
Operating Cycle	189.64	Times Interest Earned	3.69

As far as profitability is concerned, Glenwood reports better Gross Profit Margin (55.58%) and better Profit Margin (23%) than Eads' Gross Profit Margin (52.62%) and Profit Margin (18%). However, because sales and production costs were identical, the variation in the profitability again is based solely on how each company differently reported inventory costs. It also appears that Glenwood is more

efficiently using its assets and invested capital to bring shareholder wealth. Its Return on Equity, a key ratio for investors, is over 6% higher than the ROE of Eads. At a glance of these ratios, Glenwood seems to be the sure investment, no questions asked. However, the financial statements reveal that Eads is a better company for investors in the long run.

Income Statements

Each company achieved the same level of sales with identical amounts of inventory sold and operating expenses incurred. The variation in net income between the two, shown in Figures 1-3 and 1-4, is a result of differing inventory valuation methods.

Figure 1-3
Glenwood Income Statement
For Year Ended December 20X1

Sales Revenue	$398,500
Cost of Goods Sold	-177,000
Gross Profit	221,500
Operating Expenses	
Rent Expense	-16,000
Depreciation Expense	-19,000
Bad Debt Expense	-994
Other Operating Expenses	-34,200
Income from Operations	151,306
Interest Expense	-27,650
Income Before Taxes	123,656
Income Tax (25%)	-30,914
Net Income	$92,742
Per share of common stock (3200 shares outstanding)	
Earnings Per Share	$28.98

Glenwood, using FIFO, reported lower costs of goods sold, as it expensed inventory based on the order in which it was purchased. This boosts profit margin, but also leaves a higher remaining inventory that must be carried over into next period. Therefore, with sales kept constant in the upcoming year, Glenwood would report higher cost of goods sold for that year.

Figure 1-4
Eads Income Statement
For Year Ended December 20X1

Sales Revenue	$398,500
Cost of Goods Sold	-188,800
Gross Profit	209,700
Operating Expenses	
Rent Expense	-
Depreciation Expense	-41,500
Bad Debt Expense	-4,970
Other Operating Expenses	-34,200
Income from Operations	129,030
Interest Expense	-35,010
Income Before Taxes	94,020
Income Tax (25%)	-23,505
Net Income	$70,515
Per share of common stock (3200 shares outstanding)	
Earnings Per Share	$22.04

Eads took the opposite approach. Using LIFO, the company reported higher cost of goods sold which reduced gross profit margin but also reduced the value of unsold assets on the balance sheet at the end of the accounting period. Because of this, Eads will be able to report a higher gross profit margin for the next year, with all else held constant.

Glenwood's approach is beneficial in the short term in order to boost earnings and keep investors and potentially attract new ones. However, Eads' approach to reporting income will be better for the company in the long run, as it could potentially report greater increases in profit margins for the upcoming year.

Another important item on these Income Statements to pay attention to is the depreciation expense. This expense works very similarly to the expense of cost of goods sold, as expensing more now will mean lower expenses later with all else held constant.

Glenwood, using Straight Line Depreciation on its assets, reports such expense at a steady and predictable rate each year, while Eads, using Double Declining Balance Depreciation, reports depreciation expense at an accelerated rate during the early years of the asset. The company then decreases the depreciation expense each year, creating greater Operating Income with all else held constant.

Statement of Changes in Stockholder's Equity

This statement shows financial statement users a company's activity in Equity, whether there be an increase in the number of share's outstanding, or dividends paid for the year.

Because common stock and dividends paid is identical for the two companies in 20X1, the only variation in this statement for each company is the amount of retained earnings added to equity. This variation is shown on the following page in Figures 1-5 and 1-6.

Figure 1-5
Glenwood
Statement of Changes in Stockholder's Equity
For Year Ended December 20X1

	Common Stock	Retained Earnings	Total
Balance January 1, 20X1	$ -	$ -	$ -
Issuance of Ordinary Shares	160,000		160,000
Total Comprehensive Income		92,742	92,742
Dividends		-23,200	-23,200
Balance December 31, 20X1	$ 160,000	$ 69,542	$ 229,542

For Glenwood, retained earnings increases significantly due to reasons mentioned above in the Income Statement Analysis—low cost of goods sold and low depreciation expense boosted net income, which increased earnings.

Figure 1-6
Eads
Statement of Changes in Stockholder's Equity
For Year Ended December 20X1

	Common Stock	Retained Earnings	Total
Balance January 1, 20X1	$ -	$ -	$ -
Issuance of Ordinary Shares	160,000		160,000
Total Comprehensive Income		70,515	70,515
Dividends		-23,200	-23,200
Balance December 31, 20X1	$ 160,000	$ 47,315	$ 207,315

For Eads, retained earnings increased but not nearly at the rate of that of Glenwood, for the same reasons mentioned above. Eads reported a higher cost of goods sold and higher depreciation expense for the year, which decreased net income and, therefore, lowered retained earnings.

Statement of Cash Flows

In the previous statements, Glenwood uses different expensing methods to increase its net income in the short run. This makes Glenwood appear to be superior financially. However, the statements of cash flows, Figures 1-7 and 1-8, show that Eads may be the more profitable company.

Figure 1-7 Glenwood Statement of Cash Flows For Year Ended December 20X1	
Net Income	$92,742
Adjustments to Reconcile Cash	
Increase in Accounts Receivable	-99,400
Increase in Inventory	-62,800
Increase in Allowance for Doubtful Accounts	994
Increase in Accounts Payable	26,440
Increase in Interest Payable	6,650
Depreciation Expense	19,000
Net Cash Flow provided by Operating Activities	-16,374
Cash Flows from Investing Activities	
Purchase of Land	-70,000
Purchase of Equipment	-80,000
Purchase of Building	-350,000
Increase in Notes Payable	-
Net Cash Used by Investing Activities	-500,000
Cash Flows from Financing Activities	
Issuance of Common Stock	160,000
Payment of Dividends	-23,200
Net Cash Provided by Financing Activities	136,800
Net Increase in Cash	-$379,574
Cash January 1, 2014	$ -
Cash December 31,2014	$379,574

Because Glenwood is reporting higher net income, it is forced to pay a higher income tax. When comparing the income statements from the two companies, this may be overlooked if an investor is focusing on the bottom line. However, when the companies reconcile their expenses to show actual flow of cash, Eads reports higher cash flows, as its lower reported income resulted in lower a tax expense.

Figure 1-8 **Eads** **Statement of Cash Flows** **For Year Ended December 20X1**	
Net Income	$70,515
Adjustments to Reconcile Cash	
Increase in Accounts Receivable	-99,400
Increase in Inventory	-51,000
Increase in Allowance for Doubtful Accounts	4,970
Increase in Accounts Payable	26,440
Increase in Interest Payable	6,650
Depreciation Expense	41,500
Net Cash Flow provided by Operating Activities	-$325
Cash Flows from Investing Activities	
Purchase of Land	-$70,000
Purchase of Equipment	-80,000
Purchase of Building	-350,000
Subtract Leased Equipment	-92,000
Increase in Equipment Payable	83,360
Increase in Notes Payable	380,000
Net Cash Used by Investing Activities	-$128,640
Cash Flows from Financing Activities	
Issuance of Common Stock	$160,000
Payment of Dividends	-23,200
Net Cash Provided by Financing Activities	$136,800
Net Increase in Cash	$7,835
Cash January 1, 2014	$ -
Cash December 31,2014	$7,835

Furthermore, higher depreciation expenses and higher allowance for doubtful accounts allow Eads to add back those noncash expenses, further increasing its cash flows. However, Eads did make a different asset management decision than Glenwood by opting for a Capital Lease of Equipment rather than just renting it. More will be discussed about this in the next section, but as far as the Statement of Cash Flows is concerned, this decision causes an $8,640 increase in new cash used by investing activities for Eads compared to Glenwood.

This extra cash flow could potentially benefit shareholders in a number of ways. It could allow for repayment of long term debt, increased payment of dividends, investment in treasury stock, as well as pay off interest on a loan. With this in mind, Eads holds a great advantage with its superior cash flow.

Balance Sheet

Like the Statement of Cash Flows, the Balance Sheet provides insight that might push investors more towards Eads. As explained above, inventory and retained earnings are going to differ, as well as accumulated depreciation and allowance for bad debt. However, these are items whose differences will decrease over time, as variances caused by differing reporting methods tend to average out over a longer period.

A couple items on the Balance Sheets, shown in Figures 1-9 and 1-10 hold much more significance for the two companies' future. The first, cash on hand, allows the company to pay off creditors or investors and puts the company in a better position if unexpected expenses arise.

Figure 1-9
Glenwood
Classified Balance Sheet
For Year Ended December 20X1

Assets		Liabilities	
Current Assets:		Current Liabilities	
Cash and Cash Equivalents	-$426	Accounts Payable	$26,440
Accounts Recievable	-99,400	Interest Payable	6,650
Inventory	-62,800		
Allowance for Bad Debts	994	Long Term Liabilities	
Total Current Assets	-$161,632	Note Payable	380,000
		Total Liabilities:	$413,090
Fixed Assets:			
Land	-$70,000		
Building	-350,000		
Accum. Depr. Building	10,000	Equity	
Equipment	-80,000	Common Stock	$160,000
Accum. Depr. equipment	9,000	Retained Earnings	69,542
Leased Equipment	-	Total Equity:	$229,542
Accum. Depr. Leased Equip.	-		
Total Non-current Assets:	-$481,000		
Total Assets:	-$642,632	Total Liabilities and Equity:	$642,632

In addition to extra cash, Eads also increased its assets by taking on a Capital Lease of Equipment (shown in Figure 1-10) as opposed to renting equipment like Glenwood. This increased the company's net worth as well as provided stability and predictability for operating expenses in the future. This is because the payment for the Equipment is $16,000 annually for 8 years.

Glenwood, on the other hand, does not have this certainty, as it is currently renting equipment for $16,000. But, sadly this price is not definite. The supplier of this equipment cannot guarantee this price past the second year of rental. This could potentially be a detriment to future incomes if the price of renting the equipment

increases significantly in years to come. Therefore, as shown in Figure 1-10, Eads is in a more stable position regarding its assets and future expenses.

Figure 1-10
Eads
Classified Balance Sheet
For Year Ended December 20X1

Assets		Liabilities	
Current Assets:		Current Liabilities	
Cash and Cash Equivalents	-$7,835	Accounts Payable	$26,440
Accounts Recievable	-99,400	Interest Payable	6,650
Inventory	-51,000	Total Current Liabiites:	$33,090
Allowance for Bad Debts	4,970		
Total Current Assets	-$153,265	Long Term Liabilities	
		Lease Payable	$83,360
Fixed Assets:		Note Payable	380,000
Land	-$70,000	Total Long Term Liabilities:	$463,360
Building	-350,000		
Accum. Depr. Building	10,000	Total Liabilities:	$496,450
Equipment	-80,000		
Accum. Depr. equipment	20,000	Equity	
Leased Equipment	-92,000	Common Stock	$160,000
Accum. Depr. Leased Equip.	11,500	Retained Earnings	47,315
Total Non-current Assets:	-$550,500	Total Equity:	$207,315
Total Assets:	-$703,765	Total Liabilities and Equity:	$703,765

2. Financial Analysis—Molson Coors Brewing Company

Executive Summary

Molson Coors is much more than a beer brewing company. It experiences several significant transactions that have little or nothing to do with the selling of beer. These items provide a solid income via extraordinary and nonrelated items, leaving the company's consistent income and operational income with major discrepancies. Nonetheless, Molson Coors' RNOA in 2013 varies from 4% to 34% depending on the calculation methods. With all factors considered, as discussed in the analysis below, a fair calculation of the company's true RNOA is 11.52%, which is extremely agreeable. With returns like this, Molson Coors has shown that they have to ability to effectively manage their assets to be very profitable. Furthermore, digging a little deeper into the company's long-term financial position, the Price-Earnings-Growth rate was calculated to be 1.14 (see Appendix). As anything below 1 is generally considered a great buy, this company holds an impressive ratio. With a solid RNOA and a good PEG ratio, this company can be considered a safe and quality investment.

Income Statement Analysis

Molson Coors has experienced significant growth in sales and gross profit over the past three years. This is a promising sign. It could potentially mean that the brand is

gaining popularity, and the company is growing a larger customer base. This growth could potentially be due to the increased spending on marketing and general administration. Increased spending in this area is not a concern at this point, as it is expected with higher revenues. However, due to the slight decrease in Operating Income Profit Margin, it may be something to keep an eye on for the future. Below is a table that compares sales, gross profit, and primary operating expenses for the past three years.

Figure 2-1
Sales vs Marketing, General and Administration Expenses

In Thousands	**2013**	**2012**	**2011**
Sales	$6,000	$5,615	$5,170
Net Sales	4,206	3,917	3,516
COGS	2,546	2,353	2,049
Gross Profit	1,661	1,564	1,467
Mktg, Gen. and Admin. Expenses	1,194	1,126	1,019
Operating Income before Taxes	$467	$438	$448
Operating Income Profit Margin	**7.8%**	**7.8%**	**8.7%**

Delving deeper into the Income Statement, treatment of Special Items and Other Income is a gray area. Both of these are subtotals that contain non-operating activities. However, Molson Coors includes Special Items in its Operating Income figure. The reasoning behind this may be that Special Items contains items such as Gains on Disposal of Investments, while Other Income includes items such as Gain from Other Foreign Exchange and Derivative Activity. The key difference between these two is that Other Income includes transactions that have nothing to do with the brewing and selling of beer, while Special Items are infrequent or unusual items that have some relation to the function of Molson Coors as a beer company. With

this established—that Special Items and Other Income are not included in Operating Income—Operating and Persistent Income can be calculated.

The equation for Net Operating Profit is shown below.

Net Operating Profit = Net income – after tax nonoperating items (Special items, Equity income in Miller Coors, Interest income, Interest expense, Other income, & Discontinued Operations).

Persistent Income, however, can be calculated: **Income from continuing operations before taxes – Other income + Special items expense = Persistent income from continuing operations before tax – income tax = Persistent Income.** Below is a table to show the comparison between the two.

Figure 2-2
Net Operating Income vs. Persistent Income 2013

In Thousands	**Net Operating Income**		**Persistent Income**
Net Income	$567	**Income from cont. op. pretax**	$655
Special Items*	176	**Other income**	-19
Equity income Miller Coors*	-474	**Special Items**	200
Interest Income*	-12	**Persistent Income from cont. op. pretax**	836
Interest Expense*	162	**Income Tax (12.8%)**	-107
Other Income*	-17		
Discontinued Operations*	-2		
Noncontrolling Interest*	-5		
Net Operating Income	$395	**Persistent Income**	$728

* All items net of 12% tax.

After computing these incomes, it is important to decide which one is a better determinant of future cash flows. Considering the make up of the two income calculations, Persistent income was determined to be a better representation of the company's financial position because it includes items that consistently make up a

big portion of the company's income, such as Equity income from Miller Coors. This is a good sign, as it shows that the company has consistent cash flows that are more than sufficient. However, The since the majority of this income results from investment in MillerCoors, Net Operating Profit is a better determinant of the company's income from selling beer. While this is a more focused income and better for upcoming ratios, Persistent Income is still worth noting when deciding overall wellbeing of the financial state of this company. In the next section, the Balance sheet and Net Operating Assets are discussed.

Balance Sheet Analysis

When analyzing the balance sheet, the most important elements to consider for this analysis is the value of net operating assets. This is calculated with the following formula:

Net Operating Assets = Operating Assets – Current Operating Liabilities

Operating Assets for this analysis are made up of Current Assets (minus Deferred Tax Assets), Properties, and Intangibles. These accounts are labeled as operating because they are items that are necessary for and involved in everyday business. Operating Liabilities in this case are made up solely of one account: Accounts Payable and Other Current Liabilities. The reasoning behind this is that this is the only account that changes with daily operations while the other liability accounts are made up of a fixed amount of debt or discontinued operations. The table on the following page shows the calculations of Net Operating Assets for 2012 and 2013.

Included at the bottom of this table is the calculation of **Net Operating Assets excluding Intangible Assets**. The reason for this calculation is that Intangible Assets include things such as licenses and patents that are necessary tools for running a business; however, operating assets are often computed as physical equipment or accounts that change with day-to-day operations. Also, intangibles for this company are significantly large and thus significantly dilute the RNOA. Thus, both of these ways of computing Net Operating Assets have been provided in order to provide some analysis sensitivity. These will be used to calculate RNOA in the next section.

Figure 2-3
Net Operating Assets

In Thousands	**2013**	**2012**
Current Assets	$1,538	$1,748
Deferred Tax	-50	-39
Properties	1,970	1,996
Intangibles	6,825	7,235
Accounts Payable and Other Current Liabilities	1,336	1,187
Net Operating Assets	**$8,946**	**$9,753**
Net Operating Assets - Intangibles	*$2,121*	*$2,518*

Ratio Analysis

After calculating Net Operating Assets and Net Operating Profit, we can now calculate Return on Net Operating Assets, or RNOA. This ratio will tell investors how efficiently Molson Coors is using its assets to produce income. As discussed previously, we will also use persistent income as an alternate way to calculate this ratio. Furthermore, we will show the effect that including Intangibles in Net

Operating Assets has on the RNOA ratio. Figure 2-4 shows the results of this ratio manipulation.

Figure 2-4
RNOA Calculations 2013

	Net Operating Income/ Net Operating Assets	Persistent Income/ Net Operating Assets
With Intangibles	4.4%	8.1%
Without Intangibles	18.6%	34.3%

As this table depicts, depending on which accounts are chosen as Operating Assets and Operating Income, RNOA can vary tremendously. The low value, 4.41%, provides a very conservative ratio, as it is extremely narrow in its computations of income and broad with its computations of operating assets. The middle two values, 8.14% and 18.62%, result from a mixture of narrow income and wide range of assets as well as a broad income and broad sum of operating assets. The high value, 34.34%, represents an optimistic, yet unrealistic, figure, as it uses the most amount of income to the least amount of operating assets possible.

For true RNOA, the column using Net Operating Profit in the numerator is believed to be more accurate. However, as the nature of the Intangibles are not disclosed, it is hard to say to what extent they should be included in Net Operating Assets. Therefore, it is estimated that the company's true RNOA falls between 4.41% and 18.62%. Using the average of these two, 11.52%, this RNOA is very respectable, and could be considered the characteristic of a profitable company. Nonetheless, before making an investment decision on this ratio alone, other ratios must be analyzed to determine the investment quality of this company. Next, we will briefly discuss Molson Coors' Price-Earnings-Growth Ratio.

Price-Earnings-Growth ratio is used to determine a stock's value while taking the company's growth rate into account. Essentially, this gives investors a measurement of whether or not this stock is worth buying. Molson Coors' P-E-G is 1.14. (The appendix includes calculations for this ratio). In the investing world, a stock that is considered to be a great buy has a PEG ratio < 1. However, 1.14 is still a solid ratio, and with the company's given RNOA, Molson Coors would be a company whose stock has some great potential.

3. Statement of Cash Flows—Golden Enterprises

Statement of Cash Flows Introduction

The Statement of Cash Flows is a financial statement that provides users with information on all the inflows of cash from continuing operations and external investments, while also showing the outflows from investing and financing activities. This information allows users to see the difference between the net income a company reports and the actual amount of cash it gains or loses for the year. Such information is important in deciding if a company is actually as profitable and liquid as its income statement and balance sheet reveal. Figure 3-1 on the next page gives a condensed version of Golden Enterprises' Statement of Cash Flows for 2012 and 2013.

In this example, Net Income is shown solely for the purpose of comparing it to actual cash flows. In a full Statement of Cash Flows, Net Income is used in calculating Net Cash Provided by Operating Activities. This we will discuss in the next section.

There are three major areas of the Statement of Cash Flows. These are Operating Section, Investing Section, and Financing Section. It is common for the Operating Section to have a positive cash flow while the others have negative cash

flows. Ideally, there will be a net increase in cash, but for this company, the example we will use to explain the statement of cash flows, there is a net decrease in cash.

Figure 3-1 Golden Enterprises Statement of Cash Flows--Condensed For Year Ended December	2013	2012
Net Income	$1,134,037	$2,207,623
Adjustments to Reconcile Net Income to Cash:		
Net Cash Provided by Operating Activities	$4,607,029	$5,747,290
Net Cash Used by Investing Activities	-$4,075,164	-$4,991,653
Net Cash Used by Financing Activities	-$1,668,570	-$1,583,459
Net Decrease in Cash	-$1,136,705	-$827,822
Cash January 1	$1,893,816	$2,721,638
Cash December 31	$757,111	$1,893,816

Another important feature of the Statement of Cash Flows is the posting of beginning and ending balances of cash for the year. These can be found on the balance sheet, where the beginning balance is the final cash balance for the previous year and the ending balance is the final cash for the current year. Next, we will discuss the Operating Section and methods of calculating it.

Two Methods—Direct and Indirect

Before we can discuss the calculation of Cash Flows from Operating Activities, we must first establish the methodology for doing so. There are two methods that are accepted for such computations. The first is Direct, which is more preferred, but much harder to calculate. The second is Indirect, which is much easier to calculate, and thus more widely used. We will now discuss each in detail.

Under the direct method, you would simply list inflows and outflows of cash from operating activities i.e. cash received from customers, cash used to purchase supplies, etc. However, as easy as this sounds, thanks to the accrual basis of accounting, which the majority of companies are required to follow, most companies do not set up their books in such a way that this information is readily available. To list such information would require digging through invoices and bank statements and check stubs—a very tedious task. Therefore, aside from those who are primarily a cash business, i.e. a hot dog vendor, companies choose to use the indirect method.

The indirect method involves indirectly computing cash flows by starting with a base figure, net income, and making necessary adjustments from there. As this is the method that our example company, Golden Enterprises, chooses to use, this will be the method discussed in the next section: Operating Activities.

Operating Activities

The Operating Section of the Statement of Cash Flows provides a detailed explanation of the amount of cash used or provided from everyday, normal business activities. On the next page is the Operating Section from Golden Enterprises' Statement of Cash Flows in 2013.

To calculate the cash flow from this section, we start with net income, as this is essentially the net amount of operating income (with a few exceptions.) However, this figure does not account for changes in current asset and current liabilities accounts that would have an effect on total cash from operations. Thus, this is the reason for the statement of cash flows.

With Net Income, we must add back noncash expenses and losses such as Depreciation, and subtract noncash revenues and gains, such as Gain on Sale of Equipment. These items are found directly on the income statement. Figure 3-2 shows the Operating section of Statement of Cash Flows, as mentioned above.

Figure 3-2 **Golden Enterprises** **Statement of Cash Flows** **For Year Ended December 2013**	
Cash Flow from Operating Activities	
Net Income	$1,134,037
Adjustments to Reconcile Cash	
Depreciation	3,538,740
Deferred Income Taxes	-185,939
Gain on Sale of Property and Equip.	-61,040
Change in Receivables Net	106,367
Change in Inventory	200,985
Change in Prepaid Expenses	200,137
Change in Cash Surrender value of Insurance	62,906
Change in Other Assets--Other	-191,298
Change in Accounts Payable	-1,216,399
Change in Accrued Expenses	954,938
Change in Salary Continuation Plan	-49,774
Change in Accrued Income Taxes	113,369
Net Cash Flow provided by Operating Activities	$4,607,029

Next, we must adjust for changes in current assets and current liabilities accounts that occur from operations. Typically assets are listed first, followed by liabilities. This enables the formatting to be followed similarly to a balance sheet. First we will discuss effects from changes in asset accounts.

Changes in assets have an inverse effect on changes in cash. For example, if Accounts Receivable decreases, that often means that customers have paid us cash to decrease the amount they owe us. Because the revenue from this sale has been recorded during a prior period during which the original transaction occurred, on

the principle of Accrual Basis Accounting, this inflow of cash will not be included in net income. So, we must add it back to net income, as we did in the statement above. All current assets work the same way; if their account balance decreases, you add the change back to net income. If their account balance increases, you subtract the change from net income. To explain, if accounts receivable increases, that means some of the sales contributing towards net income were on credit. This means that though we recorded the revenue, we did not actual receive cash. Thus, we have to theoretically subtract this amount from revenues by reducing net income.

Current Liabilities work the opposite way. If a current liability, such as accounts payable, increases, this means that we transacted an expense on credit. Therefore, we would record an expense, reducing net income, but we would not actually give up any cash. Therefore, we have to add back cash in the amount that the current liability increases. Oppositely, if accounts payable decreases, this means we used cash to pay off the item we bought with credit. Therefore, if a current liability account decreases, its corresponding effect on cash is a decrease as well.

As you can see, the majority of the accounts used in this section are classified as current, as they are the ones that most commonly change with operating activities. However, there are a couple accounts, such as Salary Continuation Plan in this case, that are not current but are still used in computing Operating Cash Flows. This is because the nature of these accounts is that of an operating item. When the accounts are not clearly labeled as operating or non-operating, this can be an area where you will have to use your judgment in which accounts to include. Next, we will discuss how to calculate the cash flows from Investing.

Investing Activities

Investing activities are considered transactions that are external from daily operating and normal business events. These are items that may include investing in other companies, purchasing and selling Property, Plant and Equipment, and revenues related to investments. It is important to note that a company who sells equipment or land as a primary business activity would reconcile such transactions to Operating Cash Flows. Such items in this sense are ones that the company uses to carry out its normal business activities, such as a machine produces the final product they sell.

In the Investing Section of Golden Enterprises' Statement of Cash Flows, shown below, we see that they simply record cash spent and received from purchasing and selling fixed assets. This is fairly straightforward. If they spent cash, it's a negative cash flow, and if they received cash, it is a positive cash flow.

Cash Flows from Investing Activities	
Purchase of Property, Plant, and Equipment	-$4,149,678
Proceeds on Sale of Property, Plant, and Equipment	74,514
Net Cash Used by Investing Activities	-$4,075,164

Essentially, this section shows the inflows and outflows of cash related to activities that are intended to generate income and cash flows in the future. If the cash flow is negative from this section, is often true that the company is expanding their production capacity by purchasing more revenue generating assets than they are selling. If the cash flows are positive from this section, it could be that the company is attempting to generate cash by downsizing or getting rid of old or excess assets. Next, we will discuss the Financing Section.

Financing

The final section of this financial statement involves cash flows related to stockholders and creditors, or financing activities. Below is the Financing Section for Golden Enterprises.

Cash Flows from Financing Activities	
Debt Proceeds	$38,361,200.00
Debt Repayments	-38,287,529.00
Change in Checks Outstanding in Excess of Bank Balances	-267,502.00
Purchases of Treasury Shares	-6,860.00
Cash Dividends Paid	-1,467,879.00
Net Cash Used by Financing Activities	-$1,668,570.00

These activities, much like investing activities, are very straightforward. If we received cash from increasing our debt, then we add it to the cash flows. If we spent cash to pay off debt, pay dividends, or buy back stock, then we subtract these amounts from the cash flows.

Financing activities are important for gaining the cash to use for investing and operating activities. Furthermore, outflows in this section are important to keep good relations with creditors and investors. A negative cash flow in this section, oddly enough, is often times better than a positive cash flow. The former represents the fact that you are able to use cash to repay debt, pay investors, etc. The latter might imply that you are taking out more debt than you are able to pay back. For the beginning years of the company, this situation is acceptable. However, as old debt begins to mature and investors want their dividends, if these types of payments are not outflowing, then the company could potentially be in trouble.

Golden Enterprises is able to pay off nearly as much debt as they acquire, along with buying back stock, which they hope to sell at a higher price and create more cash flow. They are also able to pay dividends to their investors, which may serve as an attraction for new investors.

Statement of Cash Flows Analysis

Once we have calculated the cash flows from each section, and summed them up to reach Net Change in Cash, we have finally completed an entire statement of Cash Flows. On the next page is an example of the finished product along with an example analysis.

By comparing the cash flow statements of two consecutive years, we can make assumptions about the company's ongoing success or decline. We can see in Figure 3-3 that Golden Enterprises experienced both declining net income and increasing deficit in cash flows in 2013.

In the operating section, there is a major fluctuation in accounts payable, accrued expenses, and accrued income taxes. These accounts deal with expenses that we have recognized on the balance sheet but have not spent any cash to pay them off. In 2012, net cash spent to pay off accounts payable was approximately $300,000, while that of 2013 was over $1.2 million. This could be seen as a move by Golden Enterprises to pay down current debts in order to have better liquidity in the future. However, accrued expenses in 2012 decreased throughout the year, causing a $132,524 deduction from cash flows for the year, while this same account increased by over $900,000 in 2013, creating a large inflow of operating cash. This

change counterbalances the activity in accounts payable from a cash flow standpoint. This could be a strategy by management to have a better estimate of costs in order to plan for the future. This could indicate more accrued expenses and less accounts payable. In addition to this activity, Accrued Income Taxes provided $800,000 less cash inflow in 2013 than it did in 2012. A major cause of this is likely that less income means fewer taxes. Therefore, the company expensed less accrued taxes and thus could not add them back to cash flows.

On the investing section, the Golden Enterprises purchased significantly less property, plant, and equipment, but this is likely due to the fact that they generated less revenues, and they could also be gearing up for the 20% expansion mentioned in the case study that they are planning for 2014, a purchase of $5,000,000. By being a little more conservative with such spending this year, they are allowing themselves to have a better capability of affording this expansion in the following year.

In financing activities, more debt was paid off, more treasury shares were purchased, and more dividends were paid in 2013 than in 2012. Though this seems like a poor management decision—paying out more money when the company made less net income—it can be seen as a decision whose benefits will be reaped long term. By paying off more debt now, there will be less interest expense in future periods. Furthermore, by purchasing treasury stock, there may be opportunity to resell it at a higher price and generate a nice profit from the stock turnover. Also, the paying out of more dividends may be an encouragement to investors that this

company is thinking long-term expansion and simply used this year to prepare for increased profits in the future.

By analyzing such activities within the statement of cash flows, we can deduce the company's mindset and plans for the future. After building and analyzing this financial statement for Golden Enterprises, it seems that they would be a good company to invest in, as stock prices will likely dip now due to decreased income but will surely increase next year when the big expansion begins.

4. Accounts Receivable—Pearson

Executive Summary

Between 2008 and 2009, Pearson's sales increased significantly (by over 16%). Due to the nature of their business, all of Pearson's sales are on account. Therefore, credit policy must be a major concern for the company, to ensure that they are receiving payments in a timely manner. According to an industry standard, normal time to collect a receivable is around 79 days. With this in mind, Pearson needs some major improvement in their collection time, as such abilities have been sub par for consecutive years.

Pearson's average Days Sales Outstanding (DSO) was over 97 days in 2008. In the following year, gross receivables increased along with sales, as was to be expected. However, average receivables increased at a slightly lower rate than sales, meaning an increase in AR turnover and a decrease in the average collection period. Yet while things improved for 2009, their average of 93 days to collect receivables still lagged far behind the norm.

In order to make Pearson better able to compete with those in their industry, management should really work to bring the DSO to a much more reasonable level. They have a couple options that could potentially help them achieve this. First, they could offer more cash discounts to customers who pay within a given time period,

such as 10 days after the sale. This could incentivize customers to take advantage of the discount, saving themselves money and providing the company with quicker payments. Another method Pearson could use would be to penalize those who don't pay within the due period. For instance, if an account goes unpaid until its deadline has passed, Pearson could start compounding interest on that account for every period it goes unpaid. Opposite the first method, this would motivate customers to pay their bills on time to avoid greater expenses. This would also provide Pearson with compensation for holding receivables longer than they were due. By implementing some of these small changes, Pearson could likely bring down its DSO to an industry standard level within two to three years.

Accounts Receivable

An account receivable is generally a current asset account for recording payments that you are owed but have not yet received. There are two types of receivables, trade and non-trade. Trade receivables involve accounts from customers who have received a product or service and have given you a verbal commitment to pay you for such items. Non-trade receivables involve accounts that you are owed that do not directly relate to your sale of goods or services, such as travel advances to an employee.

Accounts Receivable differ from Notes Receivable by their maturity and repayment terms. Notes Receivable are typically, though not always, held for longer periods of time and earn interest during these periods, while Accounts Receivable are usually held for shorter periods of time and are typically non-interest bearing.

Sometimes, accounts receivable are not collected in full or at all. Customers may not be able to or not willing to pay, leaving you with a bad debt. Because of this, GAAP states that accounts receivable are to be reported at Net Realizable Value, or at the amount you reasonably expect to collect. Therefore, contra accounts exist to offset the bad debts or sales returns that you will likely encounter. Using Pearson as our example, we will discuss the two major contra accounts for accounts receivable in the next sections.

Provision for Bad Debts

Provision for bad debts essentially deals with the scenario mentioned above: non-paying customers. This provision, or allowance as it is commonly known, serves two purposes. First, it allows actual collectable receivables to be more accurately recorded, and it allows companies, such as Pearson in this case, to expense bad debts in the same period the corresponding account receivable was created. This simply keeps the companies books consistent with the expense recognition principle.

An important thing to note about this provision is that it is simply an estimate. In reality, a company cannot accurately predict every account that will not be paid, therefore the management team would use past trends to determine a reasonable allowance for bad debts in the following period. There are two ways to calculate this estimate. The first is computed as a percentage of gross receivables, and the second is calculated by using a percentage of sales. Using a percentage of gross receivables has the benefit of recording more accurate net AR balances, while

percentage of sales method focuses more on providing a realistic expense for bad debts during the period. Both are acceptable by GAAP. Below is a table that uses percentage of gross receivables by age of the account.

Figure 4-1
Pearson PLC Accounts Receivable Aging Schedule

Figures in Millions	**Trade Receivables balance**	**Estimated % Uncollectible**	**Accounts Estimated Uncollectible**
Within due date	£1,096	2%	£21
Up to 3 mo past due	228	4%	9
3-6 mo past due	51	25%	13
6-9 mo past due	20	50%	10
9-12 mo past due	4	60%	2
More than 12 mo past due	20	90%	18
Total	£1,419		£74

Essentially this method takes into account that the older a receivable is, the less likely it is to be recovered. Therefore, managers will put together an aging schedule to calculate how old each receivable is and what percentage of it is reasonably uncollectible. The table then totals each of the individual amounts to find the final estimated uncollectibles and uses this to create the allowance for doubtful accounts. To illustrate the activity involving this account, on the next page is a T-account showing Pearson's adjustments to this account throughout the year.

The "72" at top represents the beginning balance of £72 million at the beginning of the year. The 5 and 3 deal with changes in exchange differences and acquisitions, respectively. These activities are important but are slightly unnecessary for the basic explanation of this contra account. Therefore, we will focus on the £26 million credit and the £20 million debit that also took place during this period.

Pearson PLC	
Provision for Bad and Doubtful Debts	
(Figures in £ Millions)	
	72
5	
	26
20	
	3
	76

The journal entry for the £26 million credit to this account was to add to the provision and record the expense for more bad debts that were expected to occur for the period. The entry (along with the financial statement it affects) was entered as follows:

Bad Debt Expense	26,000,000		Income Statement
Provision for …		26,000,000	Bal. Sheet

The £20 million debit to the Provision account occurred as accounts were actually deemed uncollectible and were written off the books. By lowering the provision account, you're basically showing that the expenses you provided for actually took place and thus the allowance can be reduced. In a perfect world, the allowance account would always end up at zero because all the bad debts that were provided for would equal the accounts actually written off. However, this is almost never the case. Here is the entry corresponding to this activity:

Accounts Receivable	20,000,000		Bal. Sheet
Provision for …		20,000,000	Bal. Sheet

As shown on the previous page, this provision account increases as more bad debts are estimated and decreases bad debts are realized. Next, we will discuss another contra account that deals with allowing for sales returns.

Provision for Sales Returns

With any business that sells tangible goods, sales returns are inevitable. Products are faulty; the customer got the wrong size, etc. Because of this fact, businesses are required to allow for returns if they can be reasonably estimated. To do so, they use an allowance for Sales Returns account, or in Pearson's case, a Provision for Sales Returns. By recording such information, receivables are more closely recorded at their net realizable value.

Sales returns provisions are calculated similar to provisions for bad debts. Companies find an estimate using percentage of sales or percentage of accounts receivable. They then credit the allowance for the estimated returns from the year. Below is a T account showing activity in the Provision for Sales Returns account for Pearson.

Pearson PLC	
Provision for Sales Returns	
(Figures in £ Millions)	
	372
	425
443	
	354

The 372 credit represents the beginning balance in the provision of £372 million. The 425 credit comes from estimating this year's Sales Returns and providing accordingly. The 443 debit shows the actual sales returns that Pearson experienced this year, to the tune of £443 million. Finally, the 354 represents the ending balance in this provision account for the year ended December 31st, 2009.

Below are the journal entries regarding the two events recorded in this account in 2009.

Sales Returns and Allowances	425	
Provision for Sales Returns		425
Provision for Sales Returns	443	
Accounts Receivable		443

Just like provision for bad and doubtful debts, this provision for sales returns account increases as the company estimates returns for a period and decreases as the company realizes these returns for the given period.

Ratio Analysis

Like with most financial analyses, a great way to compare progress in a certain area from one period to the next is through financial ratios. These give more comparable, easier to understand numbers that give analysts a pretty good idea about the status of a given item within the firm. For example, ratios that correspond with Accounts Receivable are AR Turnover and Days Sales Outstanding. The former compares sales with average accounts receivables to see how many times per year the company actually collects outstanding accounts and issues new receivables. The latter refers to the amount of time, in days, that it takes the company to collect all the money from a given account. With these ratios, analysts can determine if a companies credit policies are effective, if their collection rate is causing cash flow issues, and other related characteristics. Figure 4-2, shown on the next page, portrays the calculation of these ratios for Pearson.

Figure 4-2 Pearson PLC Accounts Receivable Ratios		
	2009	**2008**
Credit Sales, net	£5,624	£4,811
Avg. Gross Trade Receivables	£1,447	£1,282
Accounts Receivables Turnover	3.89	3.75
Avg. Collection Period	93.88	97.30

From 2008 to 2009, Pearson's sales and trade receivables significantly increased, which is a good sign that the company is continuing to grow and expand. Another good sign for Pearson is that accounts receivable turnover increased slightly, meaning that they are able to hold turn their receivables into cash about 3.89 full times a year. Because of this increased turnover ratio, the average collection period went down by nearly four days. This is a great step in the right direction. However, in order to match their competitor, Pearson still needs to bring its DSO down below 80 days. If this were to happen, Pearson would experience better cash flows, which is very important for expansion.

5. GAAP Reporting—Graphic Apparel Corporation

This chapter is composed of an email to a client. In this scenario "The Accounting Firm" is reaching out to their client Nicki in response to some questions about proper reporting methods. To serve as a realistic interaction between client and firm, this chapter is in email format.

Subject: Getting Back On Track

To: nicki@gac.com
From: c.mccall@theaccountingfirm.com 12:34 P.M. (10 Hours Ago)

Nicki,

How are you? I hope all is well at Graphic Apparel Corporation!

We, The Accounting Firm, have been able to thoroughly analyze your bookkeeping practices and come up with a couple solutions that will help get your company back up to GAAP standards. Up to this point, your accountant has been recording transactions in a logical, functional manner. However, for the new creditor's standards, we will have to implement a few minor changes.

Below, I have attached all of the necessary journal entries regarding these changes, as well as specific answers to each of the questions you sent us last week.

The first issue that came up during our analysis was in the area of revenue recognition. It is to my understanding that the custom shirt branch of your business is relatively new, yet thriving. While this is great for GAC, it is important to note that you cannot recognize the revenue from custom orders, or any orders, until your customers have received your product. This follows the assumption that revenue should be recognized in the period which it is earned. Furthermore, because you have already received partial payment, you must record this as unearned revenue until the shirts are actually sent to the customer. For information on how to handle this situation as far as bookkeeping goes, see the attachments.

The next minor fix that needs to take place deals with the accounting for your new customers. According to the information you provided us, it seems that some of your new customers are likely to default on their payments. Because you can reasonably estimate this "bad debt," GAAP say that you must account for it by creating an "Allowance for Doubtful Accounts" account. This account is a contra asset with a credit balance that essentially reduces your Accounts Receivable by the amount that you reasonably estimate will not be collected. For instance, if your AR balance is at $10,000 and you estimate that you will not collect $500 worth of your receivables, then you would record your Net Accounts Receivable as $9,500—where Gross AR is a debit balance of $10,000 and Allowance for Doubtful Accounts has a credit balance of $500. This provides more accurate information to the bank about the net realizable value of your receivables.

Another area to focus our attention is the recording of sales returns. According to your recent surveys, it seems that nearly $15,000 of your graphic tees are still out at retail stores, yet most of the stores no longer have your shirts on display. Though it seems likely that most will be returned, you have not had a situation like this in the past, and therefore, you cannot reasonably estimate the amount of sales returns you will have. Therefore, you need to reduce the sales revenue from these shirts and put them back on your books as inventory. This way, you are not understating your inventory by not including shirts that could easily be returned. Of course, you must remember that you would not increase your inventory by the $15,000 selling price of these shirts. Rather, you would record them at the lower of cost or market. Again, see the attachments for more details on how to handle this change.

The final problem we need to address is the water damage that your plain t-shirts incurred during the month of May. Although it was very creative of you to work the damage into your design, according to GAAP standards, these shirts are damaged and must be impaired to bring them back to their net realizable value. Now, sadly this will involve you recording a loss on your income statement, as the value of your inventory has decreased. However, if you continue to get normal selling price for these shirts then this inventory impairment will not impact your net income. We just want to implement this change so GAC is not overstating its inventory and thus overstating its current ratio.

This brings us to the final topic: the impact on your relationship with the bank. As we have discussed above, there are quite a few changes that need to be

made in order for your books to be reported correctly according the GAAP standard. Of course, these changes are going to have some effect on your balance sheet, namely on your current assets and liabilities. The attachments will give you the exact numbers, but these changes will ultimately reduce your current ratio enough that you will have to reach out to equity investors in order to get your ratios back up to the bank's minimum requirement. To be safe, you should reach for about **$10,000** in equity funding, and then your current ratio will be back to an acceptable level.

If gathering that much capital is an issue, you could expedite the production of your custom shirts, send those off, and update your unearned revenue to sales revenue. This would reduce your current liabilities (unearned revenue) and increase your current assets (Accounts receivable) enough to bring your current ratio back to 1.01, an appropriate level.

I hope our solutions were helpful, and please feel free to contact us via email or phone if you have any questions.

Respectfully,

Cole McCall, CPA
Assurance Partner
The Accounting Firm

Attachment 1: Journal Entries

Solution 1

Required journal entry:

Sales Revenue 10,000
    Unearned Revenue 7,500
    Accounts Receivable 2,500
*To reduce sales revenue from unfulfilled custom order, establish unearned revenue corresponding to cash received, and to reduce accounts receivable from sales not yet made.

Solution 2

Required journal entry:

Bad Debt Expense 3,000
    Allowance for Doubtful Accounts 3,000
*To bring accounts receivable to net realizable value by accounting for accounts that are likely to default.

Solution 3

Required journal entries:

Sales Revenue 15,000
    Accounts Receivable 15,000
*To reduce sales and accounts receivable by amount in which returns are expected but unknown.

Inventory 7,800
    Cost of Goods Sold 7,800
To increase inventory and reduce cost of goods sold by cost amount of unknown but expected sales returns in entry above. 7800 = 15,000(1-.48), where .48 = profit margin.

Solution 4

Require journal entries:

Loss on inventory damage 5,100
    Inventory 5,100
*To impair inventory to net realizable value, where 5,100 = .5*10,200, the reported amount of plain shirts and ink at cost. This number is chosen based on the fact that half of the inventory was damaged and no circumstances lead us to believe otherwise that damaged shirts are held in other inventories.

6. Depreciation Methods—Airplane Industry & Waste Management

Executive Summary

Depreciation is a necessary and effective way of matching an asset's expenses with the revenues it produces. There are several ways to compute depreciation rates, which generally differ from company to company and between different types of assets. In the first part of this report, the airline industry is used to show the effects of different depreciation rates on disposal of assets. Because the depreciation method used on a particular asset ultimately affects its carrying value, using one method over another can result in gains or losses depending on the sale price of the asset. Because of this, it is important for companies to depreciate their assets in a systematic and rational manner that best aligns with their intended use of a particular asset. Failure to do so can result in material under- or overstatements of net income, whether management intends to or not.

As shown in part II of this report, misrepresentations of a company's financial reports can have disastrous effects. To illustrate this, the incident involving Waste Management and Arthur Andersen is discussed. In this example, Waste Management's executives use questionable accounting methods, including depreciation techniques, to inflate the company's net income and ultimately line

their own pockets. Looking out for their own financial interest, the auditing firm, Arthur Andersen, issued unqualified approval of these false reports. Because of this, both Waste Management officials and Arthur Andersen faced severe penalties involving increased regulation and hefty fines.

Part I - Depreciation

Depreciation is a method of allocating expenses with the use of assets to produce revenues. For example, when a company purchases a machine that they will use for the next five years, if they charged it to an expense account upon the purchase, then the entire expense for that machine would be charged to the current year, even though the machine will be used over several. This would cause a mismatch between the expense for that machine and the revenue it will bring in by manufacturing products. According the expense recognition principle, all expenses must be matched to revenues in the same period. Therefore, depreciating an asset provides a way to achieve this.

The four major components necessary to compute depreciation are the original cost of the asset, the salvage value, the estimated useful life, and the depreciation method. The cost of the asset is obviously the implied cash price or the value of the asset recorded on the company's books. The salvage value is the amount the company believes they can recover upon disposal of this asset. It is not common for assets to have a salvage value of zero, as they are simply discarded when the company is finished with them. Estimated useful life can depend on several things, which will be discussed in the next section. However, this is the number of years

that a company believes that the asset will be used for production or to generate revenues. Finally, the depreciation method is one of the generally accepted methods that GAAP suggests. However, if a method is rational and systematic, then companies are free to come up with a method that best suits their business activities. Next, the most common methods of depreciation will be discussed.

There are several types of depreciation methods and rates that companies use. These include straight-line, double declining balance, sum of the year's digits, and the activity method. Each of these methods, besides double declining balance, uses the depreciable base of an asset (cost minus salvage value) and then divides this number by useful life, estimated units of production, or another depreciation rate, depending on the method. Double declining balance differs in that it uses twice the rate of a straight-line method, and depreciates the asset from its original cost, until its book value is equal to its salvage value. For the most part, these differences are determined by market standards or individual company activities. To illustrate the effects that using different depreciation rates can have on a company's financial statements, the airline industry will be analyzed in the next section.

Airline Industry

In the following example, three major airline companies, Northwest, Delta, and United all make the same exact purchase for a Boeing 757 in 2005, at a price of $75 million. According the each company's policy, they all use the same residual (salvage) value equal to 5% of sales, or $3,750,000. However, these three companies all use differing depreciation rate on this specific type of asset. The reasons for these

differing rates will be discussed in the next portion of this analysis. However, before delving into the differences, below is a table that summarizes the purchase, depreciation, and disposal of this airplane for each of the three companies.

Figure 6-1

Differences in Depreciation and the Effects on Disposal

	Northwest	Delta	United
Book Value January 1, 2005	$75,000,000	$75,000,000	$75,000,000
Residual	3,750,000	3,750,000	3,750,000
Depreciable Amount	71,250,000	71,250,000	71,250,000
Useful Life (Years)	15	20	28
Annual Depreciation	4,913,793	3,562,500	2,590,909
Accumulated Depreciation at December 31, 2008	19,655,172	14,250,000	10,363,636
Book Value at December 31, 2008	55,344,828	60,750,000	64,636,364
Sale Price I	55,000,000	60,000,000	65,000,000
Gain (Loss) on Sale I	**(344,828)**	**(750,000)**	**363,636**
Sale Price II	60,000,000	60,000,000	60,000,000
Gain (Loss) on Sale II	**$4,655,172**	**-$750,000**	**-$4,636,364**

As shown above, each company uses a different useful life for the same exact asset. Northwest estimates a useful life of 14.5 years, while Delta and United estimate 20 and 27.5 years, respectively. There are a couple reasons as to why some variances in this estimation may occur from company to company. First, companies may estimate the asset's useful life on the basis that they are looking for tax breaks. For example, if the company uses a lower useful life, they will be able to expense this asset more quickly, and thus report lower taxable incomes. Therefore, given they have the same tax rate as another corporation, they will be able to realize greater tax benefits sooner. A plan such as this would also induce the companies to use a method such as double declining balance, where the majority of the depreciation expense comes in the first few years of the asset's useful life.

Another reason that companies are likely to use different useful lives for their assets could be due to their business model. For example, some companies may believe that their competitive advantage is always having the newest, most up-to-date planes, while other companies may focus their business model on long-term use of these expensive assets. Therefore, the former will not estimate an extensive useful life if they know that they will be disposing of the asset in a few years. And vice versa, the latter will not estimate a short useful life if they plan to use it for a great length of time. Thus, companies depreciate assets at different rates. This can have a significant effect on the financial statements.

As shown in the table above, in Sale I, companies depreciate their planes at different rates, which leads to varying sale prices when it comes time for disposal. Based on the carrying value of that asset, the manner in which the company records the sale on its books can have a number of different outcomes. For Northwest, the carrying amount of the plane at the time of disposal is $55,344,828. Because of this, Northwest is offered $55,000,000 for the plane. If Northwest takes this deal, they will have to record a loss of $344,828, as the selling price would be less than the book value. Oppositely, because of their depreciation rate, United's plane at this same time has a carrying value of $64,636,364 and a sales price of $65,000,000. In this situation, United's higher carrying value brings a higher price, which results in the recording of a gain on disposal. While the Sale I situation could be due to the companies' varying use of the planes, the large fluctuation in these sale prices is very unlikely.

Most of the time, assets are sold at their fair value, which can be determined by market price, appraisal value, or other valuation method of a given asset. This fair value amount is essentially what the asset is deemed to be worth, given the condition it is in. Considering the fact that all three of these planes were purchased for identical prices and have been used for identical amounts of time, it is more likely that a situation similar to Sale II would occur. In this scenario, all of the planes have the same sales price, despite their carrying values. This results in the opposite outcome compared to the first scenario. For instance, Northwest would now record a gain of $4,655,172, as it has a carrying value lower than this uniform sales price. However, United would now record a loss of $4,636,364 since its carrying value is above this fair value pricing. Delta's $750,000 loss does not change, as it faces the same sale price for both scenarios.

Part II – Earnings Management

While GAAP encourages a use of depreciation method that coincides with the best fit of the business, sometimes management manipulates these calculations, along with others, in order to enhance the appearance of the company's financial statements. This "window dressing" is known as earnings management, and is exemplified in the following example.

Waste Management was, quite obviously, a garbage hauling company who was convicted of several counts of fraud. Their charges consisted of failing to record expenses for impairments and depreciation, establishing inflated environmental reserves (liabilities) in connection with acquisitions, improperly capitalizing a

variety of expenses, and failing to establish sufficient reserves (liabilities) to pay for income taxes and other expenses. Essentially, this company found several ways to overstate their bottom line and thus artificially inflate their earnings. Endorsed by Arthur Andersen, the accounting firm responsible for auditing this company, Waste Management continued with this fraudulent activity, until they were eventually caught by a new CEO, who questioned the accounting methods used. At this point in time, their stock prices dropped tremendously, leaving their shareholders to face a burden of nearly $6 billion in losses.

As discussed in Part I, depreciation methods can be illegally manipulated for financial reporting purposes. As part of this major scandal, Waste Management used a particularly phony method of depreciating their assets. They avoided depreciation expenses by extending the estimated useful lives of their garbage trucks while, at the same time, making unsupported increases to the trucks' salvages values. Essentially, this meant that the older and more used the asset was, the more it was worth on the books. By doing this, executives of Waste Management were able to overstate net income and make the company appear more attractive to investors.

These executives committed such blatant fraud for a number of reasons. First, their compensation was tied to earnings, so they were looking to report the best number possible. Furthermore, they wanted the company to appear profitable so they could retain their high level positions and also reap greater retirement benefits.

Of course, management could not have gotten away with this without the help of their auditors. Arthur Andersen, motivated by under-the-table

compensation, came up with a plan to hide fraud from all years it had taken place and then signed off on the company's financial reports, verifying their validity. When they were exposed, they took a couple measures to save their reputation. These included an agreement to pay a $7 million antifraud injunction and also complying to be censured under the SEC's rule of practice. However, this obedience was short-lived.

Only a few years later, Arthur Andersen was involved in another scandal. This time the penalties were much more severe. After aiding Enron with several counts of fraud, Arthur Andersen ultimately had to give up its license to practice as a Certified Public Accounting firm. While the company was not entirely banned from operating, the effects of its fraudulent involvement have kept the firm from recovering even slightly.

7. Recording Liabilities—GAAP vs. IFRS

Executive Summary

Construct is a construction materials manufacturing company that experienced a lot of unwanted EPA involvement and litigation due to their 2007 purchase of a piece of property from BigMix, a concrete manufacturer. This land was expected to have potential environmental hazards; however, Construct believed that holding an escrow account because of this would negatively affect the sales negotiations. Thus, no indemnification provision was reserved.

A year later, BigMix declared bankruptcy, and Construct attempted to gain ownership in part of the failing company. Construct was not successful in this endeavor. However, this seemed to have no effect on their financial statements.

In 2009, the EPA began looking into this tract of land for potential water contamination. Construct was given an estimated probability that penalties would arise from this investigation. However, a liability relating to this could not be recorded due to inadequate probability according to GAAP standards. According to IFRS, the liability would have been recorded, as it was more likely to happen than not.

After more investigation, the EPA determined that there would in fact need to be environmental remediation, and given BigMix's financial status, the cost

burden of this remediation was placed on Construct. The costs were reasonably estimable and probable, necessary criterion for GAAP and IFRS, so the liability of these costs was recorded on Construct's books. In 2011, more costs arose and were subsequently added to the existing environmental liability.

Also during 2011, Construct had filed suit against BigMix to help mitigate the losses from this remediation. By 2012, Construct expected that they could recover up to $1 million from BigMix and believed this was very probable. However, according to GAAP and IFRS, no gain contingency could be recorded for this expectation, as it would report revenues before they occurred. Thus, the potential settlement could only be disclosed in the footnotes.

There are several differences between GAAP and IFRS. Some of these differences would have significant effects on a company's financial reporting, if they were to use one instead of the other. In this case, the only significant difference that Construct would have incurred by using IFRS over GAAP is the expected loss contingency in 2009. However, as actual figures were revealed in 2010, the original difference would have been smoothed out by year-end adjusting entries.

2007- Indemnification Provision at time of purchase

GAAP: Because the amount for this loss contingency is not reasonably estimable, nor is it probable, it can be considered an uncertainty, and the liability should not be recorded. However, GAAP encourages the disclosure of this uncertainty in the footnotes. The codification discusses this:

> ***50-9:***
> *Uncertainties associated with environmental remediation loss contingencies are pervasive, and they often result in wide ranges of reasonably possible losses with respect to such contingencies. Further, resolution of the uncertainties and the cash-flow effects of the loss contingencies often occur over a span of many years. Accordingly, this Subtopic encourages, but does not require, additional specific disclosures with respect to environmental remediation loss contingencies that would be useful to further users' understanding of the entity's financial statements.*

IFRS: IFRS does not specifically mention environmental remediation. Rather, it gives a broad standard for loss contingencies to be reported. Essentially, IFRS takes the same approach as GAAP on this event:

> ***21.4*** *An entity shall recognise a provision only when:*
> *(a) the entity has an obligation at the reporting date as a result of a past event;[Refer: paragraph 21.5]*
> *(b) it is probable (ie more likely than not) that the entity will be required to transfer economic benefits in settlement;*
> *[Refer: Appendix to Section 21, particularly example 9]*
> *and (c) the amount of the obligation can be estimated reliably.*

In this situation, Construct cannot reliably estimate an amount of this potential obligation, nor can it prove that such loss associated is even probable. Therefore, no liability is recorded.

2008 – Liability incurred from creditor's bankruptcy

GAAP: In this case, BigMix is the creditor of Construct, meaning that BigMix's filing for bankruptcy would cause no potential losses for Construct. Thus, no liabilities need to be accrued.

IFRS: Again, BigMix owes no money to Construct at this point in time, so their declaration of bankruptcy would not result in increased liabilities for Construct.

2009 – Contingent Liabilities and their probability

GAAP: According to GAAP, in order for a contingent liability to be recorded, the event causing the loss must be probable and the amount of the loss must be reasonably estimable. In this case, there is a 60% chance that the penalties from the EPA will occur. However, it can be argued that 60% is closer to the accounting measure of "reasonably possible" than it is to "probable." Therefore, this potential loss would be disclosed but not accrued.

> ***ASC 450-20-20*** *defines "probable" as "likely to occur." While the assessment of these terms is subject to an entity's judgment, "likely" under U.S. GAAP typically is considered a much higher threshold (i.e., approximately 80 percent) than "more likely than not" under IFRSs (i.e., greater than 50 percent).*

IFRS: IFRS has a lower standard than that of GAAP. For a contingent liability to be recorded, its probability of happening simply has to be more likely than not. Because there is a 60% chance that this will happen (40% chance that it will not) the loss of $250,000 and the corresponding liability should be recorded.

> ***Recognition of a provision***
> *An entity must recognise a provision if, and only if: [IAS 37.14]*
> - *a present obligation (legal or constructive) has arisen as a result of a past event (the obligating event),*
> - *payment is probable ('more likely than not'), and*
> - *the amount can be estimated reliably.*
>
> ***IAS 37.23*** *defines probable as "more likely than not to occur" (i.e., "the probability that the event will occur is greater than the probability that it will not").*

2010 – Environmental Obligations

GAAP: According to the codification:

> *The estimation of an entity's allocable share of the joint and several remediation liability (see paragraph 410-30-55-4) for a site requires an entity to do all of the following:*
> - *a. Identify the potentially responsible parties for the site*
> - *b. Assess the likelihood that other potentially responsible parties will pay their full*

allocable share of the joint and several remediation liability

- *c. Determine the percentage of the liability that will be allocated to the entity.*

In this case, both Construct and BigMix are considered potentially responsible parties (PRPs), but given the financial status of BigMix after its Chapter 11 bankruptcy, the EPA placed the burden of the remediation on Construct. They did so by issuing a unilateral administrative order to Construct, which essentially states that Construct must either front the costs to fix the problem, or they face severe penalties and fines for non-compliance. Thus, Construct immediately began the process of remediating.

In 2010, the entire costs of this remediation effort are not reasonably estimable. However, some of the costs including legal fees and the cost of RI/FS are estimable and are considered part of the remediation effort. Therefore, these amounts, $100,000 and $300,000 respectively, should be accrued. The codification supporting this is as follows:

30-11

The remediation effort is considered on a site-by-site basis; it includes the following:

- *a. Precleanup activities, such as the performance of a remedial investigation, risk assessment, or feasibility study and the preparation of a remedial action plan and remedial designs for a Superfund site, or the performance of a Resource Conservation and Recovery Act of 1976 facility assessment, facility investigation, or corrective measures studies*
- *b. Performance of remedial actions under Superfund, corrective actions under the Resource Conservation and Recovery Act of 1976, and analogous actions under state and non-U.S. laws*
- *c. Government oversight and enforcement-related activities*
- *d. Operation and maintenance of the remedy, including required postremediation monitoring.*

30-12

Determining any of the following is part of the remediation effort:

- *a. The extent of remedial actions that are required*
- *b. The type of remedial actions to be used*
- *c. The allocation of costs among potentially responsible parties.*

The costs of making such determinations, including legal costs, shall be included in the

measurement of the remediation liability.

While also working to fix the issue at hand, Construct filed suit against BigMix for an unspecified amount. This was essentially to recoup some of the costs of this remediation. However, according to the codification, these cannot be considered part of the costs of the effort. Therefore, they would not be accrued as a part of the environmental liability.

> ***30-13***
> *The costs of services related to routine environmental compliance matters and litigation costs involved with potential recoveries are not part of the remediation effort.*

IFRS: Because IFRS does not have a specific method of accounting for environmental remediation, the general accounting for provisions would be used to determine the necessary actions for this event. Because the total obligation of $400,000 is reasonably estimable, probable, and has risen from a past event, this is a liability that should be accrued.

> **Measurement of provisions**
> *The amount recognised as a provision should be the best estimate of the expenditure required to settle the present obligation at the balance sheet date, that is, the amount that an entity would rationally pay to settle the obligation at the balance sheet date or to transfer it to a third party.* ***[IAS 37.36]*** *This means:*
> - *Provisions for one-off events (restructuring, environmental clean-up, settlement of a lawsuit) are measured at the most likely amount.* ***[IAS 37.40]***
>
> *A provision is recognised as contamination occurs for any legal obligations of clean up, or for constructive obligations if the company's published policy is to clean up even if there is no legal requirement to do so (past event is the contamination and public expectation created by the company's policy) [Appendix C, Examples 2B]*

2011 – Environmental Obligations (cont.)

GAAP: According to the codification excerpts above, this additional estimated $1.5 million cost for the remediation would be added to the already accrued liability.

IFRS: As with GAAP, IFRS would also add this new $1.5 million cost of the remediation plan to the total remediation provision.

2012 – Gain Contingencies

GAAP: The chance that Construct will receive the $1 million settlement is estimated at 75%, making it a probable event. However, gain contingencies do not work the same as loss contingencies. According to the codification:

> ***25-1***
> *A contingency that might result in a gain usually should not be reflected in the financial statements because to do so might be to recognize revenue before its realization.*
> ***50-1***
> *Adequate disclosure shall be made of a contingency that might result in a gain, but care shall be exercised to avoid misleading implications as to the likelihood of realization.*

Therefore, no gain contingency can be recorded. However, Construct can disclose this gain as long as it is not misleading to financial statement users.

IFRS: IFRS takes the same approach to this situation. Even though a 75% chance is very high, it would not be considered "virtually certain," making it a contingent gain and thus, not recorded. IAS 37 speaks on this issue:

> ***Contingent assets***
> *Contingent assets should not be recognised – but should be disclosed where an inflow of economic benefits is probable. When the realisation of income is virtually certain, then the related asset is not a contingent asset and its recognition is appropriate.* ***[IAS 37.31-35]***

8. Long-term Liabilities—Rite Aid

Executive Summary

In this analysis, we discuss the many types and characteristics of long-term debt. Using Rite Aid, a nationwide drugstore, we are able to delve into several instances of debt including secured and unsecured notes, convertible and callable bonds, and other elements that define a given debt instrument. Furthermore, we explain the discount amortization process, the difference between straight-line amortization and effective interest, and how this affects the company's books.

As with most debt instruments, the recognizing and recording of interest expense, through either a non-interest bearing or traditional note, is a major part of the accounting for debt. With this in mind, this paper walks through the varying journal entries that accompany different scenarios of this nature, along with amortization tables to demonstrate how companies can create schedules of interest expense and the cash outflows related to them.

Finally, having defined a vast array of long-term notes, we take the discussion a step further with an analysis and comparison of Rite Aid's financial position regarding debt and that of the industry average. Here, we see that Rite Aid's debt ratio far exceeds the drugstore industry average, as the company's stockholder equity has a debit balance. We then elaborate on what this means for the company

and how this translates to the S&P credit rating system, giving an estimated rating based on Standard & Poor's predefined criteria.

Debt and Indebtedness

In order to conduct business and thrive in the marketplace, companies often seek external funding. While many companies raise such capital through sale of equity, or ownership in the business, nearly every company obtains the money they need via issuance of debt. Now, debt can come in all shapes and sizes, so in order to give a glimpse into the world of debt financing, this paper will analyze Rite Aid and its financial statements for the fiscal year 2009.

Rite Aid, a popular drugstore franchise, is recognized throughout the nation. Many people shuffle through a given store on a daily basis, making it seem that business is thriving. However, Rite Aid seems to have gotten into quite a bit of debt. Before discussing the negative effects from too much debt, this paper will first describe and define some of the terms related to Rite Aid's financial obligations.

There are many key terms used to distinguish the different types and elements of debt. For example, for a debt to be **guaranteed** this means that if the financial obligation cannot be met by the debtor, then it will become the legal financial obligation of the guarantor. This is essentially a way to mitigate risk, by holding multiple people responsible for the debt. Other terms include **secured** and **unsecured** debt, where secured debt means that the loan or other instrument is backed by assets or other collateral. Therefore, unsecured debt has no such safety feature. **Senior** debt means that in the case of liquidation, its repayment takes

priority over other "junior" debt. A **fixed-rate** loan is one where the annual interest rate is locked in for the term of the loan, despite changes in market interest rates. **Convertible bonds** are ones that can be traded in for common stock at the end of the term, rather than cashing them out. A couple final important terms for this paper are **par**, **discount**, and **premium**. When a bond (or note) is sold to investors, there are a number of factors that determine price. First, there is the **coupon rate**, which is the stated rate of interest that the debt holder will receive each year as a compensation for allowing the borrowing of funds. Next, there is an **effective rate**, which is also known as the accepted market rate of return on a given type of loan. When these two rates are equivalent, the debt is said to be sold at **par**. When the effective rate is lower than the coupon rate, this means the debt is paying out a higher interest rate than the accepted market rate, so the debt must be sold at a **premium**, or above the face value. Oppositely, when the coupon rate is less than the market rate, it is said to be sold at a **discount**. When sold at par, no adjusting entries are necessary. However, when sold at a premium or a discount, these must be amortized over the term of the loan to bring the carrying value even with the face value. This will be more discussed later. With these terms in mind, the discussion will now turn to specific examples of Rite Aid's debt and their characteristics.

Rite Aid's Many Forms of Debt

Rite Aid's total debt for fiscal year 2009 is $6,370,899,000. This is made up of $51,502,000 in current maturities of long-term debt, $6,166,706,000 in long-term debt, and $152,691,000 in lease financing obligations. This may seem like an

excessive amount of debt. This is true, and Rite Aid is not in a good position. However, more on this analysis will come later. For now, a few of the different types of Rite Aid's loans and their relating journal entries will be illustrated.

The first major type of debt to discuss is a 7.5% senior secured note due March 2017. From the key terms explanation above, it is clear that this note is one that is backed by the company's collateral, and is high on the repayment priority list. The 7.5% denotes the rate of interest that must be paid in return for borrowing this money each year. This note has a face value of $500,000. It was sold at par, as its carrying value does not change from FY2008 to FY2009. Below is the journal entry to record the issuance of this note.

Cash	500,000	
Notes Payable		500,000

This note is sold at par value, as there is no premium or discount recorded, and no discrepancy between cash received and the face value of the note. Now, because the majority of long-term debts include semi-annual interest payments, the following entries must be done twice a year to record payments of interest.

Interest Expense	37,500	
Cash		37,500

Here, the $37,500 expense comes from the face value of the note times the coupon rate multiplied by the fraction of the year that the interest expense is covering, or $500,000 * 7.5% * 6/12. These semiannual payments will occur until the time of maturity, or March 2017. Upon retiring the note, the following journal entry would be required.

Notes Payable	500,000	
Cash		500,000

Note: There may also be an entry for accrued interest from January 2017 to March 2017.

The next type of note is a guaranteed unsecured note with a coupon rate of 9.375% and a face value of $410,000. This note is sold at a discount, meaning its coupon rate is lower than its effective yield. The current carrying value of this note is $405,951, meaning the current unamortized discount makes up the difference, or $4,049. This is important when it comes to recording interest expense. Because the discount has to be amortized over the life of the note to bring it to face value at maturity, it is reduced during every interest payment. Essentially, it raises interest expense above the actual cash payment in order to account for the fact that the note was bought at a discounted price from face value. The entry to do so is shown below:

Interest Expense	39,143	
Cash		38,438
Discount on NP		705

The $38,438 cash payment is calculated by multiplying the face value by the stated interest rate ($410,000 * 9.375%). The discount on NP is found by calculating the difference between the unamortized discount from FY2008 to that of FY2009 ($4,754 - $4,049). Thus, combining those two makes up the total interest expense for the period. Using the rate function of excel, we find that the effective interest rate for this note is 9.66%.

The next note under analysis is a 9.75% senior secured note also with a face value of $410,000, due June 2016. This note, like the previous one, was sold at a

discount. In accounting terms, it was sold at 98.2, or 98.2% of the face value. The journal entry to record this transaction is as follows:

Cash	402,620	
Discount on NP	7,380	
NP		410,000

Using the rate function of excel, we then find that this note has an effective yield of 10.1%. We use this information to create an amortization table to show the schedule and amounts of interest expense and the cash payments and discount amortizations that make them up.

Figure 8-1

Effective Interest Rate

Date	Interest Payment	Interest Expense	Bond Discount Amortization	Net Book Value of Debt	Effective Interest Rate
6/30/09	$ -	$ -	$ -	$402,620	10.12%
6/30/10	39,975	40,750	775	403,395	
6/30/11	39,975	40,828	853	404,248	
6/30/12	39,975	40,915	940	405,188	
6/30/13	39,975	41,010	1,035	406,223	
6/30/14	39,975	41,115	1,140	407,363	
6/30/15	39,975	41,230	1,255	408,618	
6/30/16	$39,975	$41,357	$1,382	$410,000	

The table above shows the amortization process of bringing the note to face value, so when it is paid off at maturity, there will be no discrepancy on the books. To give an example of how this table translates into journal entries for a given interest payment, the following entry for February 27, 2010 is shown below:

Interest Expense		27,167	
	Discount on BP		517
	Interest Payable		26,650

The discrepancy between this interest expense and the one listed on the table for 6/30/2010 is due to this being an accrual of interest at fiscal year end. In

other words, the interest owed at the end of February is $27,167, but when the actual payment comes due in June, four more months will have passed, and the total amount of interest expense will be $40,750, as shown on the table. Also on February 27, 2010, the carrying value of the note would be equal to the original cash purchase price plus the amortized discount, or $402,620 + $517, which gives us $403,137.

Sometimes, companies use a different method to amortize the discount on a note payable. This second method is called straight-line amortization, which essentially involves amortizing it equally over all periods, rather than using an effective interest method shown above. The following table illustrates this straight-line method.

Figure 8-2
Straight Line Amortization

Date	Interest Payment	Interest Expense	Bond Discount Amortization	Net Book Value of Debt	Effective Interest Rate
6/30/09	$ -	$ -	$ -	$402,620	
6/30/10	39,975	41,029	1,054	403,674	10.19%
6/30/11	39,975	41,029	1,054	404,729	10.16%
6/30/12	39,975	41,029	1,054	405,783	10.14%
6/30/13	39,975	41,029	1,054	406,837	10.11%
6/30/14	39,975	41,029	1,054	407,891	10.08%
6/30/15	39,975	41,029	1,054	408,946	10.06%
6/30/16	$39,975	$41,029	$1,054	$410,000	10.03%

With this method, all interest payment, interest expenses, and discount amortizations are identical for every period. This seems like a fair way to record these transactions. However, doing so involves using varying effective interest rates, as shown in the Effective Interest Rate column. Thus, it is generally preferred that companies use the effective interest rate method, though if not materially different,

it is acceptable to use the straight-line method. To understand the differences in the two methods, refer to figure 8-3:

Figure 8-3
Interest Expense Comparison

Date	Straight Line	Effective Interest	Difference
6/30/09	$ -	$ -	$ -
6/30/10	41,029	40,750	279
6/30/11	41,029	40,828	201
6/30/12	41,029	40,915	114
6/30/13	41,029	41,010	19
6/30/14	41,029	41,115	-85
6/30/15	41,029	41,230	-201
6/30/16	$41,029	$41,357	-$328

In this example, the largest difference between the two methods results in a mere $328 discrepancy, which is not materially different. Therefore either method is acceptable in this case. However, in other cases, typically involving notes with longer terms to maturity, the differences can be substantial. In situations where this is the case, the effective interest method must be used.

Retiring Debt Before Maturity

Up until this point, the notes that have been discussed were all done so under the assumption that they would be held until maturity. However, often times, companies will retire their debts before maturity, often due to changes in interest rates or a need for future cash flows. The ability to do so is generally stated in the terms of the note as a call option, meaning the debtor can choose to repurchase its debt at a certain date before maturity. When this situation arises, there is generally a gain or loss involved for the debtor, depending on the reacquisition costs. For example, suppose Rite Aid was holding a 9.5% senior note with an $810,000 face

value due June 2017, but decided to repurchase this debt during fiscal year 2010. Assuming a repurchase price of $797,769, the following journal entry would be recorded.

Notes Payable	810,000	
Discount on BP		8,481
Cash		797,769
Gain on repurchase		3,750

As shown above, Rite Aid was not required to pay face value for this note because it still had an unamortized discount balance of $8,481. Mentioned earlier, the reason for repurchase is generally due to a change in the market interest rate. Here, we can see that the current market rate is higher than the coupon rate, hence the discount. Also, the current market rate is higher than the effective yield, which is the reason that Rite Aid recorded a gain on repurchase. Therefore, in this case, Rite Aid made a wise decision to repurchase debt and make a savings of nearly $4,000. It is important to note, however, that this is not always the case. In fact, if a company is repurchasing debt to free up their cash flows from interest payments and not because of market rate changes, it is likely that they will incur a loss for doing so.

Another type of debt that differs from a traditional note is a convertible debt. This simply means that upon maturity, instead of receiving a cash payment, the debt holder has a right to convert its loan into equity in the debtor company. An investor might be attracted to this type of note if they believe there is potential for significant growth in stock prices for the debtor company. A situation like this for the debtor company would simply bring a debit to the company's liabilities and a credit to their

common stock. Depending on the fair value of their stock, there is generally a gain or loss also associated with this transaction.

Ratio Comparison with Industry

Now that we have explained various types of debt, we will compare Rite Aid's financial position to that of the drugstore industry average. Figure 8-4 includes common ratios associated with debt that investors use when analyzing the solvency and liquidity of a company.

Figure 8-4
Rite Aid Debt Ratios

Ratio	Definition	Industry Average	Rite Aid FY2009	Rite Aid FY 2008
Common-size Debt	Total liabilities / Total assets	43.8%	120.8%	114.4%
Common-size interest expense	Interest expense / Net Sales	0.4%	2.0%	1.8%
Debt to assets	Total long-term debt / Total assets	14.4%	76.8%	69.7%
Long-term debt to equity	Total long-term debt / Total shareholders' equity	26.0%	-369.6%	-483.6%
Proportion of long-term debt due in one year	Total long-term debt due in one year / Total long-term debt	6.1%	0.8%	0.7%
Times-interest-earned (interest coverage)	(Pretax income + interest expense) / Interest expense	3344.0%	-1893.5%	-884.4%

It is common for companies to have large outstanding debt, as this is a main source of funds for operations. However, compared to the industry average, Rite Aid has a large amount of debt. To explain, let's take a look at some of the ratios.

Rite Aid's common size debt percentage was 120.8% in FY2009. This means that they had more liabilities than assets, or a negative stockholder equity. This is a very bad sign. Furthermore, their interest expense in comparison to net sales is nearly six times more than the average, meaning that Rite Aid pays out six times more in interest due to their high levels of debt outstanding. Furthermore, their times-interest-earned is negative due to their lack of income production.

Rite Aid holds much more debt than the average drugstore. This is a good indicator of pending bankruptcy. To Rite Aid's benefit, their current maturities of debt is less than one percent of its total debt, compared to the industry average of over six percent. This means that most of Rite Aid's debt has longer terms to maturity, giving them more time to improve their business, recover from net losses, and make enough money to repay their debts when they come due.

In order to determine a company's borrowing rate, debtors refer to a company's debt rating. Essentially, this rating assesses the company's riskiness and their ability to repay their debts. This rating ranges from D to AAA, with D being the lowest, or most risky, and AAA being the highest, or safest rating. Due to high debt ratios, consistent net losses, and negative stockholder equity, Rite Aid's creditworthiness rating would likely range from C to CCC-. This is a terrible rating, considering that a "junk bond" is considered to be anything below BBB-. However, given Rite Aid's performance, this rating is fair and reasonably assigned.

9. Shareholders' Equity—Merck & Co., Inc. and GlaxoSmithKline plc.

Executive Summary

In this analysis, we discuss the many accounts and characteristics of stockholders' equity. By comparing and contrasting this area of the balance sheet of two companies, Merck & Co., Inc. and GlaxoSmithKline plc., we are able to explain and exemplify such accounts, the transactions involved with them, and their overall effect on the company. Furthermore, we explain the dividend distribution process, the difference between recording treasury stock at cost and at par value, and how these instances affect the company's books.

When comparing the two companies, a variety of important equity figures are discussed. First, we consider what it means to authorize stocks, the process of issuing stocks, and how to calculate stocks outstanding. We also explore the equity smoothing account of Treasury Stock and examine the many reasons companies may choose to repurchase this stock from their shareholders. Furthermore, we discuss the method of retiring stock and how this affects the different categories of stock mentioned above.

Finally, having compared the two companies' equity sections extensively, we contrast the accounting methods each company uses. Merck & Co, Inc. is an American company, thus falling under the recording guidelines of US GAAP. GSK on the other hand, is a British company who accounts for their business transactions using IFRS. Because of the differing methods, the two show some discrepancies when entering some of the same types of transactions into their respective journals. These are discussed at length before giving an analysis of the companies dividend performance for FY2007. According to this analysis, Merck offered nearly three times the dividends per share and over five times the dividend yield for its shareholders than did GSK. A more thorough analysis on these figures and more is given at the end of this report.

Shareholders' Equity

Shareholders' Equity is sometimes referred to as net assets. Put simply, it represents the worth of the company when comparing all of the things the company possesses (assets) to all of the things it owes to others (liabilities). The main accounts that make up this portion of the balance sheet include Common Stock, Additional Paid in Capital, Preferred Stock, Retained Earnings, and Treasury Stock (a contra equity account). The first three represent the initial value of the shareholders' ownership in the company, the second stands for the amount of earnings that have been accumulated over the years, and finally the treasury stock resembles a reduction of equity via buying back of stock. There are many unique rules to implement when

dealing with different transactions related to these accounts, so a comparison of Merck & Co., Inc. and GSK plc will be used to elaborate on these.

Merck & Co., Inc.

Merck & Co. Inc., or Merck for short, is an American pharmaceutical company and one of the largest in the world. According to its financial statements, it has authorized 5.4 billion shares, meaning that upon its incorporation, the founders decided that this is the maximum number of shares of this company that can enter the market place. As of December 31, 2007, only 2.98 billion had been issued, or sold to the public. This can be confirmed by multiplying the amount of shares issued by the par value of each share, where the par value is generally less than $1. In this case, the par value is $.01, so when multiplying this by 2.98 billion, the result is $29.8 million, which is the amount of Common Stock listed on the balance sheet.

In addition to authorized, and issued shares, a company can also have treasury stock, mentioned above, which represent shares of stock that a company has bought back from its shareholders. Merck, as of the end of 2007, held 811 million treasury shares. Treasury shares are usually accounted for using the cost method, which will be discussed later. However, treasury shares reduce the number of shares outstanding, which has an effect on dividend payments and earnings per share. To calculate shares outstanding, simply take shares issued and subtract treasury shares. In doing so, the difference comes to 2.17 billion shares outstanding. With the number of shares outstanding known, the total market capitalization can be calculated. Essentially, market capitalization represents the total value of all

outstanding stock for a given company. Therefore, it is calculated by multiplying current stock price by the number of shares outstanding. For Merck, with a stock price of $57.61 as of December 31, 2007, the market capitalization equaled $125 billion, a very impressive number.

These are basic facts and figures regarding Merck's common stock. More regarding this company and its equity activity will be discussed after analyzing GSK.

GSK plc.

GlaxoSmithKline, or GSK, is a British Pharmaceutical company that, like Merck, is also among one of the biggest in the world. Having already defined a majority of the following terms, we will proceed to give GSK's stock information in a curtailed manner. For GSK, 10 billion shares were authorized—nearly double that of Merck. As of December 2007, total shares issued equaled 6.01 billion. However, only 5.37 billion were free issued, the equivalent of GAAP's shares outstanding. This means that the difference, approximately 604 million, was held in treasury.

Because GSK is a British company, some of the accounting terminology used in their financial statements differs from that of Merck, as seen with "free issue shares." Two terms that fall under this discrepancy are share capital and share premium. Share capital is essentially the equivalent of a Common Stock account; that is, the par value of shares issued. Share premium is the same as Paid In Capital in Excess of Par, which was briefly mentioned above. To understand this account, refer to the following example. Suppose Company X would like to issue 1,000 shares with a par value of $1. However, because par value is simply the minimum selling

price, Company X is going to issue these shares for $10 each. This means that the total Common Stock would equal 1,000 x $1 or $1,000, while the remaining $9,000 from the transaction would be recorded into Paid In Capital in Excess of Par. It is clear from this example that this Paid In Capital account is simply a place to record the difference in proceeds between par value and market value. Next, the paper will discuss the payment of dividends, another important transaction affecting equity.

Dividends

A dividend is a distribution of earnings the shareholders, or sometimes of Paid In Capital if profits are low. Companies pay dividends to show good faith to their investors, and to give them an acceptable return on their investment. Stock prices generally decrease immediately after a dividend is paid, as investors understand they have missed out on the recent dividend.

Both Merck and GSK paid dividends in 2007. The following entries for dividend disbursement from these companies were as follows.

Merck (in $)		
Dividends Declared	3,310,700,000	
Cash		3,307,300,000
Dividends Payable		3,400,000

GSK (in £)		
Dividends Declared	2,793,000,000	
Cash		2,793,000,000

Quick analysis of the two shows that Merck declared a larger dividend, yet did not pay all of it in 2007. This is possibly due to lack of cash available or some other liquidity issue. While it may seem that GSK is the better company for not

leaving any shareholders waiting on their dividends, it is important to note that under IFRS, their accounting standards, dividends are only recorded when they are physically paid out. This means that it would be impossible for GSK to have a dividends payable balance. Also worth noting, this Dividends Declared account would be closed out at the end of the year by crediting Dividends Declared and debiting Retained Earnings. In fact, it is acceptable to debit retained earnings initially without ever running the money through a dividends account.

Treasury Stock

The last significant account in Shareholders' Equity is the contra equity account, Treasury Stock. Treasury Stock, or shares repurchased by the company, is often bought to free up future cash flows from paying dividends, to make the company's return on equity more appealing, to increase earnings per share, or to resist a takeover. Though Treasury Stock is often bought with cash, it is not considered an asset. It simply takes on a role similar to unissued stock. Merck and GSK both purchased large amounts of Treasury Stock in 2007. Here are the facts and figures involved in these purchases.

Merck repurchased 26.5 million shares in 2007, paying $1.43 billion in total, or $53.95 per share. This represents an outflow in financing activities on the statement of cash flows. The journal entry to record this would involve debiting Treasury Stock and crediting Cash. Treasury Stock is generally recorded at cost and netted against Shareholders' Equity. However, it can also be recorded at par value, which would instead reduce only the amount of Common Stock outstanding.

GSK repurchased a significantly higher amount of shares, equaling over 285 million. Of these shares, only 269 million were held in treasury while the remaining shares were retired, or removed from the total shares authorized. GSK paid over £3.7 billion to repurchase these shares, putting the average share price around £13.09. Information regarding this equity transaction and others mentioned above were found in the Movements in Equity statement. For Merck, who follows U.S. GAAP, the equivalent statement would be Statement of Stockholders' Equity.

An important factor to distinguish between GAAP and IFRS, as portrayed by these two companies, is that GAAP records Treasury Share purchases into an actual Treasury Stock account, while IFRS directly reduces Retained Earnings and holds no such account.

Ratio Analysis

Now that the Equity sections of these two companies have been fully discussed, it may be interesting to compare the two in terms of dividend activity to see which company would be the better investment. The Figures 9-1 and 9-2 provide this information.

Figure 9-1
Key Financial Figures 2007

In Millions	Merck	Glaxo
Dividends Paid	$3,307	£2,793.00
Shares Outstanding	2,173	5,374
Net Income	3,275	6,134
Total Assets	48,351	31,003
Operating Cash Flows	6,999	6,161
Year-end Stock Price	$58	£97.39

Figure 9-2 Dividend Analysis 2007		
	Merck	**Glaxo**
Dividends Per Share	$1.52	£0.52
Dividend Yield (dividends per share to stock price)	2.6%	0.5%
Dividend Payout (dividends to net income)	101.0%	45.5%
Dividends to Total Assets	6.8%	9.0%
Dividends to Operating Cash Flows	47.3%	45.3%

This table shows that Glaxo's stock price and shares outstanding are far superior to that of Merck. However, Merck paid out more dividends and possessed more assets. Furthermore, Merck experienced higher operating cash flows despite a lower net income. Perhaps it is these cash flows, which provided for higher dividends. The following table compares dividend factors between the two companies.

In 2007, Merck clearly dominated in the area of dividend distribution. Dividends per share for Merck were nearly three times that of Glaxo. Furthermore, the dividend yield and dividend payout ratio for Merck far surpassed Glaxo's. Because Glaxo holds significantly fewer assets at this point in time, they had a higher Dividends-to-Total Assets ratio. However, this is irrelevant when comparing all of the other statistics listed on this table. It is likely that Merck paid out more dividends than income to maintain its prior year dividend per share. Nonetheless, investors in Merck received much higher returns than those in Glaxo for the fiscal year 2007.

10. Marketable Securities—State Street Corporation

Executive Summary

In this analysis, we discuss the three types of investment securities that a company may hold. These include securities that are trading, available-for-sale, or held-to-maturity. Using State Street Corporation as a real world example, we analyze the effects of these securities from the standpoint of the P&L statement, the balance sheet, and the statement of cash flows. Each of these has its own important role in the company's investment activities. In this discussion, we delve thoroughly into each of these roles.

An important element to consider when accounting for these securities is how to report their value from year to year. Given that market conditions fluctuate frequently, it is essential that the carrying value of these securities reflects that. For trading securities, investments that are bought and sold typically within a very short period, all changes in value must be reflected in their carrying value on the balance sheet and reported as an unrealized holding gain(loss), thus increasing (decreasing) net income for the period. The same goes for available-for-sale securities, with one exception. Rather than increasing (decreasing) net income, the fair value adjustments for these securities are reported as other comprehensive income.

Unlike the previous two, held-to-maturity securities do not need to be adjusted for changes in fair value, as these investments are essentially locked-in until the time of maturity. With that said, it is important to record a gain(loss) on these securities at the time of sale—the same goes for trading and available-for-sale securities.

As these three securities are classified as investments, they have an effect on the investing section of a company's statement of cash flows. For some companies whose main operations deal with financing, banking, or investing, these cash flows will typically be much more significant than that of a company in another industry i.e. manufacturing. A couple things are important to remember. Gains (losses) on changes in value of trading securities must be taken out of net income—operating activities—and reported in the investment section. Gains (losses) on fair value adjustments for available-for-sale securities will have no effect on the cash flows, as they are reported in other comprehensive income. Finally, all gains (losses) on the sale of any of these securities will have an effect the statement of cash flows. As we saw with State Street, these types of activities can either free up a lot of cash for the company, or cause a major restriction.

State Street Bank

In order to efficiently use excess cash to supplement income from operations, companies often invest in either debt or equity securities. These investments can vary in size, type, and characteristics. However, there are three main categories that these fall into: trading securities, securities held-for-sale, and securities held to maturity. In order to discuss each of these investments and distinguish between

them, we will analyze State Street Bank, a financial institution whose balance sheet is made up of mostly these securities. First, we will begin with trading securities.

Trading Securities

Trading securities, on a very basic level, are investments purchased with the expectations of making a quick profit from short-term price changes. These can consist of both debt and equity securities. While being held in hopes of profit from capital gain, these securities can also provide interest or dividend income. Reported in Other Income on the P&L, the journal entry to record one dollar of this type of income is as follows:

Cash	1	
Interest (Dividend) Revenue		1

As their definition suggests, these investments typically have a high turnover rate, which hardly allows them to bring in excessive amounts of income. For this reason, companies generally hold a smaller proportion of these compared to their total investments. State Street Corporation's balance sheet exemplifies this. Their balance for Trading Account Assets is a $637 million. This may seem like an exorbitant amount; however, for a financial institution whose total assets are upwards of $222 billion dollars, this is a small drop in the bucket.

An important fact to know about these securities is that they are carried at fair value. Because they are frequently bought and sold in the market, it only makes sense to keep them up-to-date with the current prices. When making such adjustments, the company would record an unrealized holding gain or loss

equivalent to the change in the asset's fair value for the period. For a one-dollar increase in fair value, the following journal entry would need to occur.

Fair Value Adjustment-Trading	1	
Unrealized Holding Gain		1

This fair value adjustment account would be a temporary account, serving as an adjunct or contra asset account, depending on the movements in the market. The unrealized holding gain would be carried in the equity section until the asset was sold, in which case the unrealized holding gain account would be debited, and a gain on disposal account would be credited for the difference between purchase price and selling price. The same process would be done for unrealized and realized losses.

To use State Street's activities as an example, we might assume that the unadjusted trial balance for trading account assets could have had a debit balance of $552 million at year-end. Given that these securities have a market value of $637 million, the required entry would be as follows.

Fair Value Adjustment-Trading	85,000,000	
Unrealized Holding Gain		85,000,000

With this entry, the assets would be properly reported, and State Street would experience an $85 million boost toward their net income.

Held for Sale Securities

Securities that are available/held for sale are essentially in a catchall category for those that are not considered trading securities but that will also not be held to maturity. An example of this may include an equity security purchased in hopes of

long-term appreciation, or perhaps a twenty-year bond purchased with expectations of the interest rates falling in the next five years, thus potentially creating capital gains. Securities held for sale can provide dividend or interest revenue, which would be recorded identically to that of trading securities. Furthermore, these too should be carried at fair value; however, because of their semi permanent nature, any unrealized holding gains or losses should not be considered in the Income Statement. Rather, these fluctuations should be recorded as Other Comprehensive Income and as a separate component of Shareholders' Equity. A sample journal entry could be the following:

Fair Value Adjustment AFS	1	
Unrealized Holding Gain--Equity		1

For State Street Corporation, the ending balance of these securities is significantly greater than that of the trading securities. With a carrying/market value of nearly $110 billion, these securities have experienced significant price increases during the past year. According to the note accompanying investment securities, the gross unrealized holding gains for all securities in this classification was approximately $2 billion while the unrealized holding losses experienced by these types of securities was a mere $882 million. This makes the next unrealized gain, and thus total shareholders' equity, increase by over $1.1 billion in 2012.

In addition to this unrealized gain, State Street also sold a number of Available-for-sale securities. These disposals resulted in gains of $101 million, as well as losses of $46 million, netting at a gain of $55 million. This gain would in fact be reported on the income statement. However, in a statement of cash flows, the

gain on disposal would be subtracted from the operating section, and added to the investing section. This is because this transaction is considered an investing activity rather than one of the company's operations. However, for State Street, this differentiation seems to be less intuitive, as one of the company's main operations is investing.

Securities Held to Maturity

The final type of investment involves securities held to maturity. For obvious reasons, equity securities cannot fall under this category, as they have no maturity date. However, assets like bonds, mortgages, notes receivable, and other loans can all fall into this category.

These securities, because they are held until maturity at a given interest rate, experience no gains or losses in value, and thus are carried at the book value from the original transaction. Of course, these assets could have a premium or discount attached to them, depending on their interest rate relative to that of the market. This extra premium (or less discount) would be amortized over the life of the security, being reduced with each receipt of interest revenue. State Street refers to these assets' carrying value, or the net value of the investment and its corresponding premium or discount, as their amortized cost amount.

The amortized cost amount for State Street's held to maturity securities is $11.38 billion, while the market value for these same assets is $11.66 billion. The difference between these two values represents the gain that State Street would

incur if they were to sell these securities at fair value. This increase in price is likely derived from a decrease in interest rates, as the two have an inverse relationship.

In the case that State Street needs to increase their cash flows or liquidate entirely, these assets may be sold. However, it is generally in a company's best interest to hold on to these investments and receive their interest payments, assuming major fluctuations in the market interest rate have not caused drastic price changes.

Statement of Cash Flows

When any of these securities are sold or purchased, the effects are generally seen on the statement of cash flows. Due to the nature of these assets, these corresponding cash flows can be found on the investing section of this statement. For most non-financial companies, the amount of cash used or provided by the sale of these investments might not be as significant as, say, selling old machinery. However, for State Street, a financial company, the transactions relating to investment securities are quite large. This can be seen through an analysis of this company's Statement of Cash Flows. According to this statement, State Street purchased over $60 billion of available-for-sale investment securities in 2012. Below is the corresponding journal entry.

Investment Securities AFS	60,812,000,000	
Cash		60,812,000,000

This is a major cash outflow proportional to the business, as total assets for State Street are around $222 billion. If these assets fail to meet their yield expectations, this could be devastating for the company.

In addition to this large purchase, State Street also sold around $5 billion in these types of securities. There are a couple of interesting elements involved with this journal entry, however. First, in order to sell these assets, they must be written back to original cost, or historical book value. Thus, the asset would need to be credited for its current fair value, and the unrealized holding gains account would need to be debited. This results in a net credit of the asset's historical cost. Also, there will generally be cash associated with the purchase, unless it is traded for another asset, and there may be an additional gain or loss on the sale. The gain from sale would be included in net income for the period. The journal entry below will demonstrate the explanation above.

Cash	5,399,000,000	
Unrealized Holding Gains	67,000,000	
Investment Securities AFS		5,411,000,000
Gain from Sale of Securities		55,000,000

This entry depicts the investing activities providing cash flows in a very general sense. We can use this entry to determine the original cost of this asset. As mentioned above, if we take the net difference between the Investment Securities' fair value at the time of the sale and its unrealized holding gain, we will find that the historical cost for this investment was $5,411,000,000 - $67,000,000 = $5,344,000,000. (If the asset had a balance in unrealized holding losses, then the original cost would be found with the sum of the fair value and the amount in the loss account.) The $55 million gain from sale is derived from the difference between the cash received and the historical cost of this asset.

The following T account helps demonstrate State Street's activity for 2012 regarding held-for-sale securities.

Net Unrealized Holding Gain (loss) on AFS Securities	
181,000,000	
67,000,000	
	1,367,000,000
	1,119,000,000

This table can be explained with three events. The first, is that $181,000,000 simply comes from the ending balance in 2011. The debit of $67,000,000 was shown above during the sale of securities. The credit of $1,367,000,000 was done as an adjusting entry at year-end to bring the securities to fair value. The journal entry for this adjustment was as follows.

FV Adjustment AFS	1,367,000,000	
Unrealized Holding Gain		1,367,000,000

Thus, the ending balance is $1,119,000,000, which can be reconciled with their notes on Investment Securities. This adjustment would have no effect on the Statement of Cash Flows. This is because changes in fair value for securities available-for-sale are reported as Other Comprehensive Income, not Net Income.

11. Revenue Recognition—Groupon

Executive Summary

In this analysis, we discuss the major implications of recognizing revenue and the risks associated with this topic. We assess these risks at an industry wide level for retail companies such as Walmart, Amazon, and Groupon. This involves comparing and contrasting their business models and experiences and how these differences affect the levels of risk they experience.

Furthermore, we delve into an analysis on revenues vs. stock prices and attempt to derive trends from Amazon's financial position regarding these two items. Looking at over a decade of data, we draw a conclusion that stock prices tend to be more positively correlated with revenues than with net income. We further discuss possible reasons for this correlation.

Finally, we review some of the accounting errors that Groupon made during its first few years as a public company. We go into the criteria necessary for reporting gross revenue versus a simple reporting of net revenue. We then elaborate on the necessity for allowance accounts to bring revenue to a more accurate amount when accounting for risks of returned items. We show Groupon's faulty reasoning relating to this topic and how it affected their financial statements.

Lastly, we discuss how it is possible for reporting corrections to significantly reduce a company's revenue and net income, all while having zero effect on their statement of cash flows.

Revenue Recognition

One of the biggest risk areas in a company's financial statements is the amount of revenue they record. The number of rules and exceptions for properly recording the amount of sales a company truly completed can create gray areas, which the companies often times try to exploit. In this analysis, we will focus on Groupon and its revenue recognition methods, while also touching on other companies and the risks they face in relation to this topic. Furthermore, we will incorporate an analysis of the effect of reported revenues on a company's stock prices by showing trends in the amounts of these respective items for Amazon. We use Amazon in this case, rather than Groupon, as their shares have been trading on the open market for a much longer time than that of Groupon and will, therefore, provide a more thorough analysis of this relationship.

Industry-wide Risks

Before delving in to the various issues that Groupon experienced with revenue recognition, it is important to first give an overall view of the risks that companies in this industry face when recording revenue. To illustrate this, we will discuss other companies in the retail business such as Wal-Mart and Amazon.

First, we must distinguish the business models of each of these companies. Wal-Mart is in the business of selling products directly to their customers via retail

centers. Amazon also sells products to their customers, though it is completely web-based and holds all of its inventories in warehouses. Groupon holds no inventories, but rather sells its customers the rights to buy products from other vendors at discounted prices. With the differing strategies and experience between each of these companies, risk levels vary greatly. Nonetheless, there are several items that must be taken into consideration before filing the year-end financial statements.

Wal-Mart has been in business a lot longer than the other two companies. However, it continues to face the threat of over reporting its sales and thus misleading its investors. Wal-Mart, like the other companies, must take into account a number of elements when deciding what the top line of its income statement can include. In fact, each of these companies has a number of risk factors in common that its internal controls must consider. These include the following: sales returns, bad debt expenses, and even system failures.

According to GAAP, whose official standards will be discussed later, companies must account for returns of their products and incorporate this allowance into a reduction of their revenue. In other words, these companies cannot record 100% of their sales as profit if they have a proven history of receiving say 15% of their items returned. Therefore, they must take this into consideration. Of course, for Wal-Mart, this estimate may not be nearly as difficult to produce as it would for Groupon who is constantly growing and reaching uncharted territory. Amazon's uncertainty would likely fall into the middle of these two companies, as it has established a solid inventory base. However, as it continues to offer an increasing number of products, the new items will call for new estimates.

The same can be said for bad debts and system failures. There will always be customers who buy items on credit and fail to pay for them, much like there always be malfunctions in technology that could cause a failure to record an item that should have been counted as sold. Of course, as companies work to improve these systems, this risk becomes increasingly smaller.

Revenues and Stock Prices

We have briefly discussed how recognizing revenues correctly can have a major impact on a company's financial statements. We have yet to discuss why this is so important. In order to understand the significance of this topic, we must consider the users of these financials: stockholders. Stockholders, or investors, rely on a corporation's financial statements to determine if the company is a good investment or one to avoid. With that said, one of the most important items that these investors use in their analysis is the total revenue. It is this number with which they calculate intrinsic values of the companies' stock prices, so they must be reliable. The analysis on the next page shows trends for Amazon's revenues and stock prices for the years 1997-2010.

In this analysis, net income is also included in an effort to show whether investors put more significance on earnings rather than gross sales. According to this chart, there are several years—1998, 1999, 2007, 2009, and 2010—where stock prices and revenues both increased, despite reductions in net income. With this in mind, it is clear that there is a stronger correlation with stock prices and revenues than that of stock prices and net income. This is relevant because it brings us back to the fact that recognizing revenues correctly is essential for servicing the stock market fairly.

Figure 11-1 Amazon Revenues Vs Stock Prices Reported on December 31 from 1997 to 2010						
Year	**Revenue**	**% Change**	**Net Income**	**% Change**	**Stock Price**	**% Change**
1997	$ 148		$ (31)		$ 5.0	
1998	610	312.2	(125)	-303.2	53.5	966.5
1999	1,640	168.9	(720)	-476.0	76.1	42.2
2000	2,762	68.4	(1,411)	-96.0	15.6	-79.6
2001	3,122	13.0	(567)	59.8	10.8	-30.5
2002	3,933	26.0	(149)	73.7	18.9	74.6
2003	5,264	33.8	35	123.5%	52.6	178.6
2004	6,921	31.5	588	-1580.0	44.3	-15.8
2005	8,490	22.7	359	38.9	47.2	6.5
2006	10,711	26.2	190	47.1	39.5	-16.3
2007	14,835	38.5	476	-150.5	92.6	134.8
2008	19,166	29.2	645	-35.5	51.3	-44.6
2009	24,509	27.9	902	-39.8	134.5	162.3
2010	$34,204	39.6	$1,152	-27.7	$180.0	33.8

Groupon's Dilemma

As we discussed above, there can be some major gray areas involved when it comes to reporting revenues. Groupon capitalized on one of these gray areas, resulting in largely overstated revenues for FY2009 and FY2010. Before discussing their errors in reporting, let us first detail the operational flow of Groupon's business.

Groupon works with vendors around the country to sell coupons for discounted services or products from such vendors. For example, Groupon may have an offer for a customer to buy a $20 groupon that is redeemable at their local barbershop for a $40 hair cut. So, the customer would exchange their $20 dollars with Groupon and get this voucher in return. Groupon would then remit $12 (60%) to the vendor and retain the remaining $8.

Groupon's problem was that, in reference to the previous example, they were recording $20 as revenue instead of the $8 that they actually retained. This led to severe overstatements of revenue. Before discussing the SEC's comments on such reporting, we will first look at the effects this method of reporting had on Groupon's financial statements.

Figure 11-2
Groupon
Common Size Income Statement
For Years Ended 2009 & 2010

	2009		2010	
	Gross	Net	Gross	Net
Revenue	100%	100%	100%	100%
Cost of Goods Sold	64.1	30.3	60.7	10.4
Gross Profit	35.9	69.7	39.3	89.6
Marketing Expense	15.1	33.8	36.9	90.9
General and Admin. Expense	24.7	44.1	32.8	68.2
Other Expenses			28.5	64.9
Net Profit (Loss)	-4.4	-7.5	-57.9	-134.3

When evaluating this common size income statement, we can see that Groupon experienced a major shift in the weight of their expenses as a total of their overall revenues. This essentially means that reporting higher revenues made their expenses seem much less burdensome than they did under the net method. In other words, although both methods result in the same net income, beginning the income statement with higher revenues gives the appearance that the company's expenses and losses were much less severe than they were in actuality.

Another comparison to consider is the profitability and activity ratios that were majorly affected by this correction in reporting. The table below shows ratios

for Gross Margin and Asset Turnover for the two years, including those under both the gross and net methods.

Figure 11-3 Groupon Profitability and Activity Ratio Comparison				
	2009		2010	
	Gross	Net	Gross	Net
Gross Margin Percentage	35.9%	69.7%	39.3%	89.6%
Asset Turnover Ratio	2.0	1.0	3.6	1.6

Even though this reporting correction resulted in much larger profit margins, the asset turnover for both years was reduced by nearly 50%. This means that the company may have had a lower cost of sales, but they were using their assets to generate income in a very inefficient manner.

Questioning by the SEC

In order to more fully understand the common size income state on the previous page, let us give some actual figures for the differences in their revenues. Originally, Groupon reported Total Revenues of $30.4 million in 2009, when they should have reported $14.5 million. Similarly, in 2010, Groupon claimed to have $713.4 million in revenues, while the true amount of this number was more like $312.9 million.

If their net income (loss) would ultimately be the same, why would Groupon choose to report their revenues in this manner? We answered this earlier when analyzing Amazon: stock prices. Because investors often times use revenue as a base for their valuation models, the higher this number, the more likely for the

company's stock to increase in value. Therefore, it is clear that Groupon preferred to report revenues that were as large as possible.

When the SEC began to question their methods of recording all of the revenue, despite the obligation to remit 60% to the vendor, Groupon responded with an attempt to justify their approach:

> *The Company believes that, by virtue of the credit risk it bears and the Groupon Promise, it is both a seller and an issuer of vouchers. The Company is the primary obligor when it issues a Groupon voucher on behalf of a merchant, which in turn is solely responsible to deliver goods or perform services.*

Here, Groupon claims that the risk they take by offering a largely encompassing return policy should give them the rights to claim all of the revenue as their own. However, according to the ASC 605-45-45, there are flaws in their argument. Key qualifications for reporting gross revenue under this standard require that: the entity

"(4) changes the product or performs part of the service, (5) has discretion in supplier selection, (6) is involved in the determination of product or service specifications, (7) has physical loss inventory risk—after customer order or during shipping."

When assessing the business model of Groupon and their method of operations, it is clear that they do not change the product or perform part of the service, nor do they choose the supplier, get involved in the service specifications, or take on risk of physical inventory loss. In fact, their only risk is refunding the customers when they are dissatisfied with a product. Therefore, Groupon did not meet the qualifications to record gross revenue.

Other Reporting Issues

In addition to recording gross revenue, Groupon also recorded 100% of sales, without adequately accounting for sales returns—a risk we discussed that Wal-Mart

and Amazon also faced. This led to severe reporting issues, when vouchers they had sold in prior periods, and recorded as revenue, were being returned for a refund. This was a result of Groupon's expansion into a new market, selling high-ticket items, such as vouchers for Lasik eye surgery. When it was discovered that many of the customers who purchased this voucher were not physically eligible for the surgery, they all wanted a refund of their money. Groupon had been unable, and thus failed, to account for such a high level of returns. However, they recorded the revenues on these pricy items, and experienced quite a disaster when all of these customers came back demanding their money.

According to U.S. GAAP in ASC 605-15-25, revenue can only be recognized when:

> *"The amount of future returns can be reasonably estimated (see paragraphs 605-15-25-3 through 25-4). Because detailed record keeping for returns for each product line might be costly in some cases, this Subtopic permits reasonable aggregations and approximations of product returns. As explained in paragraph 605-15-15-2, exchanges by ultimate customers of one item for another of the same kind, quality, and price (for example, one color or size for another) are not considered returns for purposes of this Subtopic."*

Because Groupon was in this new market, which with they were unfamiliar and could not reasonably estimate their sales returns, they should not have immediately recognized revenue on the sale of these items. Rather, they should have created a larger returns and allowances account, thus reducing their total sales revenue.

Unchanging Cash Flows

An item that we have not discussed in this analysis is the effect of all of these reporting errors on the company's statement of cash flows. Surprisingly enough, the total cash flows for the restatement of income in 2011—a reduction of $14.3 million

in revenue and an even larger decrease in operating income of $30 million. These reductions came from the implementation of larger reserve accounts for these returns. In essence, Groupon just reduced their revenues by debiting an expense account and crediting a type of payable, or liability account, for the inevitable cash outflow that would arise from such returns. However, as these returns were not experienced until the following year, no additional cash outflows were experienced, even when the corresponding revenues and net income were required to be reduced.

12. Current and Deferred Income Taxes—ZAGG Inc.

Executive Summary

The main topic for this discussion is accounting for deferred taxes. Be it a larger corporation or a small, family business, the payment of income taxes is required by all. Thus, it is important to be able to compute differences in book income and taxable income. This analysis attempts to explain such computations and how they affect a company's books.

Using ZAGG Inc., a mobile device accessories company, we explore the different cumulative differences in various accounts that give rise to the recording of deferred tax assets and deferred tax liabilities. We then work an opposite angle by showing methods of computing cumulative differences by using the deferred tax balance and the tax rate.

Finally, we discuss the potential issues that can result from changes in Federal tax rates. We also show how to adjust the deferred tax accounts according to these tax rate changes in order to accurately report the expected benefits or expenses from these DTA's and DTL's, respectively.

Book Income vs. Taxable Income

Book income, also known as Pretax Financial Income, is the amount of income from continuing operations that companies report on their income statement before including a provision for income taxes. Taxable income, however, is the excess of revenues over expenses that the IRS recognizes as taxable for the year. These two amounts are almost never equal due to varying factors. Because of this, special accounting methods exist for recording these deferred taxes. We will analyze the financial statements of ZAGG Inc. to further explain current and deferred income taxes.

Key Terms for Understanding Deferred Taxes

Before exploring ZAGG's financial performance for fiscal year 2012, we must first define a few important terms that will be used in our discussion. These include:

1) **Permanent tax differences**-- a business transaction that is reported differently for financial and tax reporting purposes, and for which the difference will never be eliminated. A permanent difference that results in the complete elimination of a tax liability is highly desirable, since it permanently reduces the tax liability of a business. Some common examples include:
   i) Interest Revenue on Municipal Bonds
   ii) Fines or fees for breaking government regulations
   iii) Expenses incurred to attain non-taxable income

2) **Temporary tax differences—**arise when the tax basis of an asset or liability differs from the reported amounts in the financial statements. In other words, an income or expense item is recognized in one year on the income statement and another year on the tax return. Some common examples are:
   i) Different methods of depreciation
   ii) Unearned rent
   iii) Warranty costs
   iv) Installment sales
   v) Prepaid insurance

3) **Statutory tax rate--** Under the federal income tax, the statutory corporate tax rate ranges from 15 percent on the first $50,000 of taxable income to 35 percent on income over $18.3 million, with higher rates (up to 39 percent) in some income ranges that phase out the benefits of the lower rates. Most corporate income is taxed at the 35 percent rate.

4) **Effective tax rate--** The effective tax rate for individuals is the average rate at which their earned income is taxed. The effective tax rate for a corporation is the average rate at which its pre-tax profits are taxed. An individual's effective tax rate is calculated by dividing total tax expense by pretax financial income.

Of these terms, the single most important to understand is temporary differences, as these will give rise to deferred tax assets (DTA's) and deferred tax liabilities (DTL's). These amounts of deferred taxes are included in the reported income tax expense, as they cause increases or decreases in the overall expense due to activities that occurred in the current period. In other words, reporting these deferred amounts follows the accounting principle of matching expenses with the periods incurred.

In order to determine whether a temporary difference creates an increase in the balance of either DTA's or DTL's, the following equation should be referenced.

If the temporary differences causes:

- Pretax financial income > Taxable income → Record a **DTL** (Future Taxable Amount x Tax rate)
- Pretax financial income < Taxable income → Record a **DTA** (Future Deductible Amount x Tax rate)

The key point to remember here is that this equation is looking for the effect on the bottom line. For items involving revenues, this is not so tricky. However, for items involving expenses, applying the equation can seem counterintuitive. For example, a greater depreciation expense for tax purposes than book purposes would have the effect of a lesser taxable income than book income.

One last item to recognize is the valuation allowance for deferred tax assets. This is simply a contra asset account that takes into consideration the fact that some of these tax assets will go unused, as they often expire before the company has enough taxable income to realize these. This will be discussed more thoroughly later. With these terms and principles established, we can now examine how these apply to ZAGG Inc.'s operations.

ZAGG Inc.

ZAGG Inc., an acronym for "Zealous About Great Gadgets," is a market leader in mobile device accessories. They serve as a great company to analyze when discussing deferred income taxes, as they have millions of dollars of DTA's and DTL's. In FY 2012, ZAGG made the following entry to record income tax expense and adjust the balances of their deferred taxes. (In thousands.)

Income Tax Expense	9,393	
Net Deferred Income Taxes	8,293	
Income Taxes Payable		17,686

This entry, though acceptable, could also be recorded using the gross changes in DTA's and DTL's, as follows. (In thousands.)

Income Tax Expense	9,393	
Deferred Tax Assets	8,001	
Deferred Tax Liabilities	292	
Income Taxes Payable		17,686

Here, we can see that the Deferred Tax Assets increased, while the Deferred Tax Liabilities decreased, most likely due to a reversal. (A reversal takes place when a previously recorded deferred tax amount is realized i.e. book depreciation exceeds tax depreciation in future years after a DTL had originally been recorded.)

When breaking down the net deferred income taxes from the first journal entry, we can see that the DTA's are valued at $15,015 less an allowance of $713, while the DTL's are valued at $794. This results in a net of $13,508. As the balance in the prior year was $5,214, the change in this account, and thus the amount recorded in the entry above, is $8,293.

On this disclosure of deferred taxes, the total balance for deferred taxes is $13,508,000. Because deferred tax assets and deferred tax liabilities must be classified as either current or non-current—depending on the classification of the corresponding asset or liability from which these deferred taxes arose, or based on date of realization of these deferrals— and then netted together, some of these assets are reported in the current assets section and some in the other non-current assets section. On ZAGG's balance sheet, we find that current net DTA's have a balance of $6,912,000, while non-current net DTA's have a balance of $6,596,000—the sum of the two equaling $13,508,000. In cases where the DTL's have cumulative balances larger than the DTA's, then the net balance would be reported as either a current or Long-term liability or both, depending on the classification.

Using the amount recorded for Income Tax Expense, $9,393,000, we can find the effective tax rate for ZAGG Inc. by dividing this expense by the pretax financial (book) income of $23,898,000. This results in an effective tax rate of 39.3%. The difference in the 35% statutory tax rate and this 39.3% effective rate is caused by a number of adjustments including state tax, not-deductible expenses, the return to provision adjustment, and an increase in the valuation allowance.

Using Deferred Taxes to Find Cumulative Differences

In some situations, if we want to find the differences between taxable and book income, we must take the corresponding deferred tax account and divide by the tax rate. This will give us the cumulative difference between the two incomes. Let's use ZAGG's PP&E related DTL as an example.

As of December 31, 2012, the balance in the DTL for Property and Equipment was $794,000. Because this cumulative difference between tax depreciation and book depreciation has created a DTL, we can infer that the larger total depreciation expense of the two has been charged to taxable income. Using the equation given in the previous section, we will see that this is because this expense caused taxable income to be lower and thus a DTL was born. In order to estimate the dollar magnitude of the cumulative difference between these items, we will take the total balance for this DTL ($794,000) and divide it by the statutory income tax rate (35%+3%). Below is a table that shows the relationship between the cumulative difference, the tax rate, and the deferred tax liability.

(in thousands $)	Cumulative Difference in Book and Tax Depreciation Expense
	2089
	X
	Statutory Income Rate
	38%
	=
	Deferred Income Tax Liability Relating to Property and Equipment at 12/31/2012
	794

Given this information and the current book balance of Property and Equipment of $4,862,000, we can estimate that if ZAGG depreciated its assets for book purposes using the same method as it did for tax purposes, then the current balance for this account would actually be $2,773,000 ($4,862,000 - $2,089,000). If this was the case, then ZAGG would have to not only report much lower income for the periods during which it held this property and equipment, but it would also have to report lower total assets on its balance sheet.

To show how this works for DTA's we might consider ZAGG's cumulative difference related to allowance for doubtful accounts. As of December 31, 2012, the DTA related to this account has a balance of $1,020,000. The reason that a DTA was recorded for this difference is because it is an accrued expense. Accrued expenses are simply estimates of losses that a company expects to incur but have not yet actually had to pay out. In order to match costs with revenues, accruals are absolutely necessary. However, for tax purposes, these types of expenses are not deductible until actually incurred. This results in lower reported income than taxable income, thus forming a DTA.

Calculating the total dollar amount for the cumulative difference related to this allowance account works exactly the same as the previous example. We simply divide the DTA balance by the statutory tax rate. The figure on the next page exemplifies this relationship.

A separate element of DTA's that doesn't pertain to DTL's is the valuation allowance. Similar to an allowance for doubtful accounts, this allowance is a contra asset that reduces deferred tax assets by amounts that they believe are more likely

than not to go unrealized. The balance in this valuation allowance for ZAGG at December 31, 2012 is $713,000. The company recorded a full valuation allowance against a DTA generated by losses on its equity method investment in HzO. Given the uncertainty of future profitability of this investment, management has determined that it is more likely than not that the DTA will not be realizable.

(in thousands $) Cumulative Difference in Book and Tax Bad Debt Expense
2684
X
Statutory Income Rate
38%
=
Deferred Income Tax Liability Relating to Allowance for Doubtful Accounts at 12/31/2012
1020

Though we do not consider it in any of the prior examples, it is important to remember that sometimes future enacted tax rates are subject to change, thus dividing the total recorded deferred tax by one single rate would not give you the true cumulative difference. Instead, there may be an included schedule for the reversal of such deferrals.

Adjusting for Changes in Tax Rates

As we briefly discussed above, some times the government enacts changes in tax rates, causing the valuation of our deferred taxes to be inaccurate. In this instance, we must adjust these balances to reflect an accurate amount of deferred tax liabilities and assets that will be realized given the new tax rates. To do this, we

must simply take the cumulative differences and multiply them by the new tax rates to find the new balances of DTA's and DTL's. The difference between these new amounts and the amounts we previously recorded will show us how much we need to either decrease or increase such accounts. For ZAGG, we are assuming that on January 1, 2013, a new federal statutory tax rate of 30% was enacted. However, the 3% state income tax rate was unchanged. This brings our total statutory tax rate of 38% down to 33%. Below is a table that adjusts each account under the deferred taxes and shows the effect on each of these due to the new tax rates.

The bold numbers in Figure 12-1 on the following page represent the amounts by which ZAGG must adjust its books. The following journal entry serves as an explanation for these bold amounts.

Income Tax Expense	1,777	
DTL	104	
Valuation Allowance	94	
DTA		1,975

As you can see, because the tax rate was lowered, this reduced the future taxable and deductible amounts. Because DTA's were reduced by more than DTL's, this means that their benefit will not be realized in the future, and thus their reduction must be considered an expense or loss of this future benefit.

Figure 12-1 Deferred Tax Adjustments						
Account	Beg. Balance	Old Tax Rate	Total Dif.	New Tax Rate	End. Balance	Difference
Allow for DA	$1,020	38%	$2,684	33%	$886	-$134
Def. Rev.	$27	38%	$71	33%	$23	-$4
Inventories	$2,317	38%	$6,097	33%	$2,012	-$305
Stock-based Comp	$1,420	38%	$3,737	33%	$1,233	-$187
Sales Ret. Accr.	$2,456	38%	$6,463	33%	$2,133	-$323
Net Acq. Costs	$282	38%	$742	33%	$245	-$37
Intangibles	$4,372	38%	$11,505	33%	$3,797	-$575
Goodwill	$1,801	38%	$4,739	33%	$1,564	-$237
Hzo Invest.	$713	38%	$1,876	33%	$619	-$94
Reserve on NR	$569	38%	$1,497	33%	$494	-$75
Other Liab.	$38	38%	$100	33%	$33	-$5
DTA	$15,015	38%	$39,513	33%	$13,039	**-$1,976**
Allowance	-$713	38%		33%	-$619	**-$94**
Total DTA	$14,302	38%	$37,637	33%	$12,420	-$1,882
PP&E	$794	38%	$2,089	33%	$690	-$104
Total DTL	$794	38%	$2,089	33%	$690	**-$104**
Net DTA	$13,508	38%	$35,547	33%	$11,731	**-$1,777**

13. Pension Liabilities—Johnson & Johnson

Executive Summary

In this analysis, we discuss the various elements involved in accounting for retirement obligation plans. We discuss the different types of these plans, defined benefit and defined contribution. We then point out the differences and explain why the accounting for defined benefit plans is the more complex of the two. We also provide a brief discuss as to why these future payable retirement benefits can be classified as a liability (or asset) on the balance sheet.

Before discussing the specific reporting of this obligation, we show how to compute both of its components—plan assets and pension benefit obligations. We then explain how plan assets, quite obviously, make up the asset portion of this retirement fund, while pension benefit obligations (PBO) constitute the liability side. These two are netted together to come up with the total balance for what is called the funded status, which is the amount reported as an asset (or liability) on the financial statements.

Finally, we discuss how each of these factors affects Johnson & Johnson's financial reporting and related schedules. By analyzing this company's financial statements, we find that in 2007, their PBO exceeds their plan assets by $1,533

million, resulting in a funded status liability. However, this balance decreased significantly from the previous year, which reassures analysts and employees that this is not a problem area for the company.

Retirement Obligations

In most public and private firms, employees are compensated for their efforts at the company by being awarded certain benefits upon retirement. There are two types of retirement plans that companies often follow to accomplish this. First, there are defined contribution plans, where both the employer and the employees contribute money to this fund each month, typically in the form of a 401k. Then, there are defined benefit plans where the employer is the sole beneficiary of this fund reserved for retirement. This paper focuses mainly on the latter due to the intricate accounting methods involved in up-keeping such a fund. We will use Johnson & Johnson to provide a thorough analysis of this benefit plan.

Why Retirement Plans are Liabilities

When companies create retirement obligations, they are essentially recognizing the fact that at some time in the future, they will use the fund to pay out benefits to their prior employees. In other words, they expect future payable amounts, and thus must record such obligations as current and long-term liabilities according to their date of realization.

Some assumptions necessary for accounting for these obligations include the life expectancy of the employees after retirement, the number of years employed, and the future projected salary. Because companies determine the amount of

benefits that a given employee will receive during retirement, they must be able to reasonably estimate these figures while the employees are still working. For example, Johnson & Johnson must calculate not only how long they believe one of their accountants will work until they retire, but also what his or her salary will be at that point and how long they will have to fund his or her retirement. Using historical data and certain requirements such as a minimum age to retire, the companies are able to obtain some certainty of these future obligations. With that established, let us look at the key components of these retirement funds: pension benefit obligations and plan assets.

Pension Benefit Obligations

The Pension Benefit Obligation (PBO) of a given company ultimately comprises the present value of future expected liabilities. It is made up of service costs, interest costs, actuarial gains and losses, and benefits paid to retirees.

Service costs are the amount of benefits that employees have accrued for their services rendered during the current year. These are added to the PBO, as they represent future amounts that will have to be paid out to the employees who earned them.

Interest costs are essentially an amortization of the PBO based on the discount rate. Because these liabilities are recorded at present value, they must be brought to “face value” by the time they are paid out.

Actuarial Gains and Losses are simply adjustments made by the actuary who oversees the account. Changes in market interest rates and the general economy may give rise to the need for a reduction or addition of liabilities to the PBO.

Benefits paid to retirees reduce the PBO, as they represent the fulfillment of the outstanding liabilities. Like all liabilities, once they are paid off, they need no longer to be held as an obligation.

Plan Assets

Contrary to PBO, plan assets serve as the investment fund from which assets will be used to pay off these obligations. Plan assets are affected by actual returns on pension investments, contributions from the employer, and benefits paid out.

This plan asset fund is used to invest and earn a return while waiting to pay employee retirement benefits. Thus, any returns for the year are put directly back into the fund, causing it to increase. This is not to be confused with the expected return, or the return that the actuary estimates that the fund will receive. The expected return is used for calculating pension expense, which we will discuss later.

In order to have enough funding for these obligations, the employer must regularly contribute cash to the investment. Thus, any time a contribution is made, the company reduces its cash and increases its plan assets. The actual journal entry and related accounts will be displayed in the next section.

Just as the payment of benefits reduces liabilities, it also causes a decrease in the funds available. Thus, the plan assets are reduced by the same amount as the PBO whenever benefits are paid out.

Reporting Retirement Obligations on the Balance Sheet

Although records of the PBO and Plan Assets must be recorded timely and accurately, these are actually not accounts that can be found on the balance sheet. Instead, GAAP calls for a consolidation of the two into a Pension Asset/Liability, also known as the Funded Status. If the plan assets are larger than the PBO, then the funded status is reported as a long-term asset. If the PBO is larger, then the net amount is reported as a long-term liability. Supporting notes and schedules are necessary to disclose each of the aforementioned elements that go into calculating the balance of this account.

Pension Expense

When preparing financial statements, the company must record an expense for these retirement pensions. This is similar to a salaries and wages expense. However, this pension expense is made up of many separate items. These include service costs, interest costs, expected returns on the asset, and actuarial gains or losses.

These elements have been explained during discussion of PBO and plan assets. However, the expected returns can differ from actual returns, causing an adjustment to the pension expense. These expected returns are estimated by the actuary for the plan assets, and are credited against this pension expense, as they serve as direct cash inflows that go towards the payment of these pension benefits. When the expected returns equal the actual returns, then there is no concern. However, when these two numbers vary, the actual return is credited against the pension expense, but an unexpected gain is debited, resulting in a credit of the net

expected returns. For example, if the company expects that the $1,000,000 plan assets will provide a return of 8 percent, based on expected dividend and interest receipts, then their expected return is $80,000. However, if due to changes in fair value, the plan assets increase by $100,000, then the $20,000 resulting difference would be considered an actuarial gain. Thus, while the $100,000 would be credited against the pension expense, the $20,000 gain would be reduced, bring the net credit from return on plan assets to $80,000. In the next section, we will discuss this pension expense and other related items for Johnson & Johnson.

Johnson & Johnson

Johnson & Johnson, a manufacturer of products in the health care field, offers both types of retirement obligation plans, direct benefit and direct contribution. So far in this discussion, we have defined the key elements of a direct benefit plan. We will now see how these affect the balance sheet of J&J.

In 2007, J&J reported a pension expense of $646 million. Included in this expense were $597 million in service costs and $656 million in interest costs. However, the expected return on plan assets was $809 million, so this offset a majority of the expense. To record the pension expense portion of the first two items, J&J would have had an entry similar to the following:

In Millions		
Pension Expense	1253	
Pension A/L		1253

Here, the liability portion of the funded status is increased because of the related accrued expense.

Directly affected by these service and interest costs, the company's PBO had a value of $12,002 million at 12/31/07. This represents the fair value of future amounts that J&J anticipates paying out to its retirees. This value is fairly reliable, as it is adjusted every year for changes in fair values and interest rates. Although this ending value is important for balance sheet purposes, the beginning amount of the PBO is important for calculating interest expense. The following chart shows interest rate calculations for the PBO.

Figure 13-1
PBO Interest Table

In Millions	**2007**	**2006**
PBO Beg Balance	$11,660	$10,171
Interest Cost	$656	$570
Interest Rate	5.63%	5.60%

Here, we can see that for Fiscal Years 2006 and 2007, J&J applied an average interest rate of 5.6 percent to compute interest costs for the year. When comparing to some of their direct competitors, this seems to be a reasonable interest rate for the company. (Pfizer had rates around 6 percent during this time.)

J&J's PBO was reduced slightly during the period by the benefits they paid out. These totaled to $481 million. It is important to remember that these benefits do not represent a cash outflow for J&J. Rather, these benefits come from the funds reserved for this retirement obligations—the plan assets. Thus, these benefits do not directly affect the balance of the funded status, as both the PBO and plan assets are reduced by the same amount. For example, if the PBO has a value of $100, for simplicity, and the plan assets have a balance of $80, then the funded status is $20

liability. So, if $10 of benefits are paid, then the PBO now has a value of $90, plan assets have a value of $70, and the funded status remains a liability of $20.

As mentioned above, Johnson & Johnson's plan assets were also affected by these benefits. The value of these plan assets—the fair value of total invested funds—at 12/31/07, was $10,469 million. As this amount is affected by actual returns on the assets, it is important to keep track of expected versus actual returns, to see if the actuary needs to adjust its estimates. For 2006, expected returns were $701 million while actual returns were $966 million. Oppositely, in 2007, expected returns of $809 million exceeded the actual returns of $743 million. These differences seem significant at first glance, but they represent varying interest rates of less than 1 percent. Thus, it is hard to deem that they are material.

Another significant factor affecting the value of these plan assets are the contributions. From 2006 to 2007, contributions from the company and its employees increased by nearly 24 percent, from $306 million to $379 million. This seems to be a good sign for the company, as it shows that not only does it have enough cash on hand to contribute to this fund, but also that its employees are invested enough in the company to contribute to the plan.

Given the data for J&J's PBO and plan assets, we can find the total balance for this funded status for both 2006 and 2007. These were credit balances $2,122 million and $1,533 million, respectively. This means that Johnson & Johnson held significant long-term liabilities related to retirement obligations. However, due to the decrease in this liability from 2006 to 2007 and the increase in contributions between the two years, this account is not a long-term concern for the company.